QSTD2404/QSTD2408/QSTD2416

Digital Video Recorders

User's Manual

Contact US:
Q-see Products
8015 E. Crystal Dr
Anaheim, CA 92807
Website:
http://www.q-see.com
Customer Service:
Phone:877-998-3440 x 538
Email: cs@dpsi-usa.com
Tech Support:
Phone: 877-998-3440 x 539
Email: ts@dpsi-usa.com
Fax:
714-998-3509

For H.264-4-channel/ 8-channel/16-channel Digital Video Recorders

All rights reserved

Rev 091708

CAUTION

- **Please read this user's manual carefully to ensure that you use the device correctly and safely.**
- **This manual is for the 4-channel, 8-channel and 16-channel QSTD2400 Series DVRs. In this manual, we use the QSTD2408 200FPS 8-channel DVR as an example. All examples and pictures used are of this model.**
- **As products update the contents of this manual are subject to change without notice.**
- **This device should only be operated with the type of power source indicated on the marking label. The voltage of the power must be verified before using. If not going to be used for an extended period of time remove the power source from the outlet.**

Notice: *We also STRONGLY recommend that you plug the DVR and cameras into a Transient Voltage Surge Protector (UL-1449 rating). Look for a clamping voltage of 330 or lower, Joule rating of at least 400, and a response time of 10 nanoseconds or less.*

- **Do not install this device near any heat sources such as radiators, heat registers, stoves or other devices that produce heat.**
- **Do not install this device near water.**
- **Clean only with a dry cloth.**
- **Do not block any ventilation openings, and ensure good ventilation around the machine.**
- **Do not power off the DVR while it is recording! The correct operation to shut off DVR is to stop recording first, and then select the "shut-down" button at the right of the menu bar to exit, and finally to cut off the power.**
- **This machine is designed to be used indoors. Do not expose the machine to rain or a moist environment. If any solid or liquid gets into the machine's case, please cut off the power supply immediately, and ask for qualified technicians to check the machine before restarting.**
- **Refer all servicing to qualified service personnel. You should not try to service any of the parts yourself.**

Table of Contents

Table of Contents iii
CHAPTER 1 Introduction 1
1.1 DVR Introduction 1
1.2 Main Features 1
CHAPTER 2 Hardware Installation 3
2.1 Installing Hard Drive & DVD Burner 3
2.1.1 Installing Hard Drive 3
2.1.2 Installing a DVD Burner 3
2.2 Front Panel 4
2.3 Rear Panel 5
2.3.1 Rear Panel Layout 5
2.3.2 Installing Sensor Alarm 8
2.4 Remote Control 9
2.5 Controlling with Mouse 10
2.5.1 Connect Mouse 10
2.5.2 Using a Mouse 10
CHAPTER 3 Basic Operating Instructions 11
3.1 Power On/Off 11
3.1.1 Starting 11
3.2 Login & User Management 13
3.3 Recording 15
3.3.1 Record Setup 15
3.3.2 Manual Recording 16
3.3.3 Scheduled Recording 16
3.3.4 Motion Detection Recording 17
3.3.5 Alarm Recording 18
3.4 Playback 19
3.5 Backup & Viewing 21
3.6 PTZ Control 24
CHAPTER 4 Menu Setup Guide 27
4.1 Menu Navigation 27
4.2 Main Menu Setup 28
4.2.1 Basic Configuration 29
4.2.2 Live Configuration 29
4.2.3 Record Configuration 30
4.2.4 Schedule Configuration 31
4.2.5 Alarm Configuration 32
4.2.6 Motion Configuration 33
4.2.7 Network Configuration 34
4.2.8 P.T.Z Configuration 36
4.2.9 User Configuration 37
4.2.10 Tools Configuration 37

CHAPTER 5 Managing the DVR 38
5.1 Formatting Hard Drives 38
5.2 Updating Firmware 38
5.3 Loading Default Setup 39
5.4 Checking System Information 39
5.5 Checking System Log 40
5.6 Checking On-line Network Users 41
5.7 Locking & Deleting Files 42
CHAPTER 6 Remote Surveillance 43
6.1 Accessing the DVR Remotely 43
6.1.1 Accessing the DVR on LAN (through a network) 43
6.1.2 Accessing the DVR on WAN (over the internet) 44
6.2 Remote Preview 45
6.3 Remote Playback &Backup 48
6.3.1 Remote Playback 48
6.3.2 Remote Backup 51
6.4 Remote Menu Configuration 52
6.5 Remote DVR Management 52
6.5.1 Checking System Log Remotely 52
6.5.2 Lock & Delete Files Remotely 53
CHAPTER 7 Mobile Surveillance 55
7.1 Accessing by Phones with WinCE 55
7.2 Accessing by Phones with Symbian 57
Appendix A Frequently Asked Questions 59
Appendix B Instructions for the Installation of External Hard Drive 63
Appendix C Calculating Recording Capacity 65
Appendix D Compatible Devices 66
Appendix E DVR Specifications 67
Appendix F DVR Specifications 68
Appendix G DVR Specifications 69
QSEE PRODUCT WARRANTY 69
Customer Information Card 71

CHAPTER 1 Introduction

1.1 DVR Introduction

This model DVR (Digital Video Recorder) is designed especially for CCTV systems. It uses high performance video processing chips and an embedded Linux system. It also uses many advanced technologies, such as standard H.264 with low bit rate, Dual Stream, SATA interface, supports VGA output and mouse input, supports IE browser with full remote control, mobile viewing through cell phones, etc., which ensure its powerful functions and high stability. Due to these distinctive characteristics, it is widely used in banks, telecommunication, transportation, factories, warehouse, and irrigation industry and many others.

1.2 Main Features

COMPRESSION FORMAT

- Standard H.264 compression with low bit rate

LIVE SURVEILLANCE

- Supports VGA output
- Supports channel security by hiding live display
- Displays the local recording status and basic information
- Supports USB or PS/2 mouse with full control

RECORDING MEDIA

- Supports 4 X SATA HDD to record for longer periods and 1 X SATA DVD Burner (optional)

BACKUP

- Supports backup to USB 2.0 flash drives and eSATA hard drives
- Supports built-in SATA DVD burner for backup
- Supports saving recorded files in standard AVI format to a remote computer through the internet

RECORDING & PLAYBACK

- Record modes: Manual, Schedule, Motion detection and Sensor alarm recording
- Supports recycling after HDD is full
- Resolution, frame rate and picture quality are adjustable
- 64MB for every video file packaging
- 4/8/16 audio channels available depending on model
- Two record search modes: time search and event search
- Supports single and 4 screen playback
- Supports deleting and locking the recorded files individually
- Supports remote playback in Network Client through LAN or internet

ALARM

- 4/8/16 channel alarm input and 4 channel alarm output available depending on model.
- Supports schedule for motion detection and sensor alarm
- Supports pre-recording and post recording
- Supports linked channels recording once motion or sensor alarm triggered on one channel.
- Supports linked PTZ presets and auto cruise of the corresponding channel.

PTZ CONTROL

- Supports various PTZ protocols.
- Supports various PTZ presets and 32 auto cruise tracks.
- Supports remote PTZ control through the internet.

SECURITY

- Two level user group management: advance and normal, rights authorized by administrator.
- Supports 1 administrator and 15 users.
- Supports event log recording and checking, unlimited events.

NETWORK

- Supports TCP/IP, DHCP, PPPoE, DDNS protocols.
- Supports IE browser to do remote viewing.
- Supports a maximum of 5 connections simultaneously.
- Supports Dual Stream. Network stream is adjustable independently to fit the network bandwidth and environment.
- Supports picture taking and color adjustment in remote live view.
- Supports remote time and event search, mouse drag search, single channel playback with picture taking.
- Supports remote PTZ control with preset and auto cruise.
- Supports remote full menu setup, changing all the DVR parameters remotely.
- Supports mobile surveillance by smart phones or PDA with WinCE & Symbian OS on 3G networks.
- Supports CMS to manage multiple devices on internet (pending)

CHAPTER 2 Hardware Installation

Notice: *Check the unit and the accessories after receiving the DVR.*

Please disconnect the power before connecting other devices. Do not hot plug in/out

Notice: *Some vendors sell this DVR as part of a package with a hard drive already installed. If your unit already has a hard drive you can skip these steps unless you want to add additional hard drives.*

2.1 Installing Hard Drive & DVD Burner

2.1.1 Installing Hard Drive

Notice: *1. The DVR supports four SATA hard drives.*

2. Please calculate HDD capacity according to the recording setting. For details, please refer to "Appendix B Calculating Recording Capacity".

STEP1 Unscrew and Open the top cover

STEP2 Place HDD into the position shown as fig. 2.1

Fig 2.1 Installing hard drive

STEP3 Fix the HDD firmly with screws and then connect with data cables.

In addition, users can put a hard drive into HDD box shown below, if they do not need to install a DVD burner.

Fig. 2.2 Hard Drive Box

2.1.2 Installing a DVD Burner

Notice: *1. The DVD burner should be one of the compatible devices we recommend. Please refer to "Appendix C Compatible Devices"*

2. This device is only for backup

STEP1 Unscrew and open the top cover

STEP2 Connect the power and data cables. Put DVD burner into the position of CDROM. Some units ship with DVD burners pre-installed by the factory.

Notice: *If users do not need to install DVD Burner, they can install a hard drive here as following above instructions.*

2.2 Front Panel

The Front Panel Layout is shown as Fig 2.3 Front Panel.

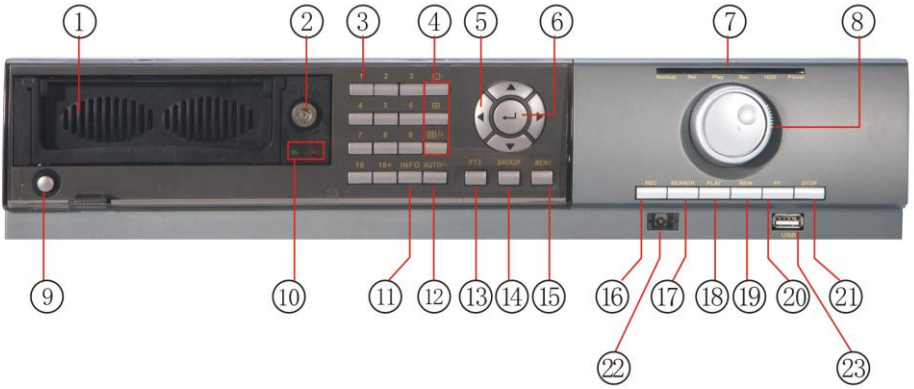


Fig 2.3 Front Panel

1	Heat Release Window	Allow heat to escape from DVR
2	HDD Lock	Lock/Unlock the hard drive
3	Number Buttons	Input numbers or choose cameras
4	Multi-screen Button	Change screen display from single, 4, and 8 screens
5	Direction	Direction buttons. Move cursor in setup or pan/tilt/zoom (PTZ)
6	Enter Button	To confirm the choice or setup
7	Indicator Lights	Working indicators of power and network, etc.
8	Shuttle	Control the playback speed
9	Power	Shut down DVR
10	HDD Status Lights	Working status of Hard Drive
11	INFO	Check basic setup parameters of recording
12	AUTO/ -	Change screens automatically/Decrease the value in setup
13	P.T.Z.	Enter PTZ mode in live view
14	BACKUP	Enter backup mode in live view
15	MENU	Enter menu in live view
16	REC	Record manually
17	SEARCH	Enter search mode
18	PLAY	Enter playback mode
19	REW	Rewind
20	FF	Fast forward
21	STOP	Quit playback mode
22	IR Receiver	For remote control receiver
23	USB Port	To connect external USB Flash Drive for backup or to update firmware

Table 2.1 Front Panel Layout

2.3 Rear Panel

2.3.1 Rear Panel Layout

The Rear Panel Layout for 8 Channel DVR is shown as Fig 2.4 Rear 8Ch.

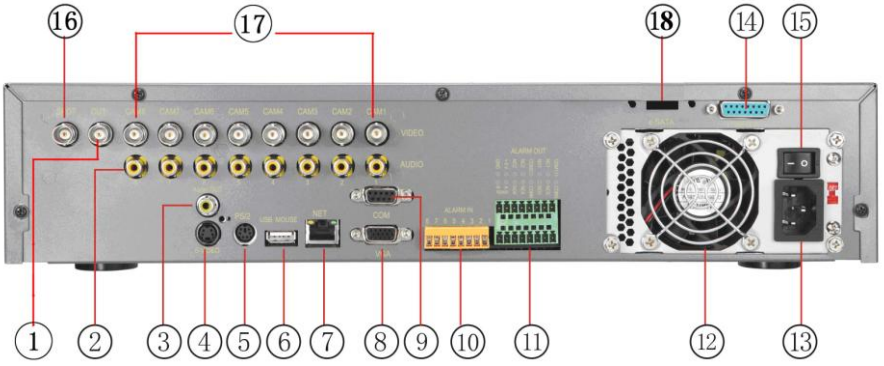


Fig 2.4 Rear Panel for 8-channel DVR

Item	Name	Description
1	Video Out	Connect to monitor
2	Audio In	Audio input for channels 1 to 8
3	Audio Out	Audio output, connect to the speaker
4	S-Video	S-Video output, connect to monitor
5	PS/2 Port	Connection for PS/2 mouse
6	USB Mouse	Connection for USB mouse
7	RJ45 Port	Connect to router for network/internet access
8	VGA Port	VGA output, connect to monitor
9	COM Port	For debugging or serial input
10	Alarm In	Connect to external sensor 1-8. Please refer to 2.3.2 Installing Sensor Alarm
11	Alarm Out	Relay output 1-4. Connect to external alarm. Please refer to 2.3.2 Installing Sensor Alarm
12	Fan	For cooling the device
13	Power Port	Connect power cable
14	Loop Out	For outputting each channel's image independently
15	Power Switch	220V or 110V
16	Spot Out	Connect to monitor as an AUX output channel by channel. Only video display, does not show menu
17	Video Input	Video input channels from 1-8
18	eSATA Port	Connect to eSATA HDD for backup

Table 2.2 8 Channel Rear Panel Layout

The Rear Panel Layout for 16 Channel DVR is shown as Fig 2.4 Rear 16Ch.

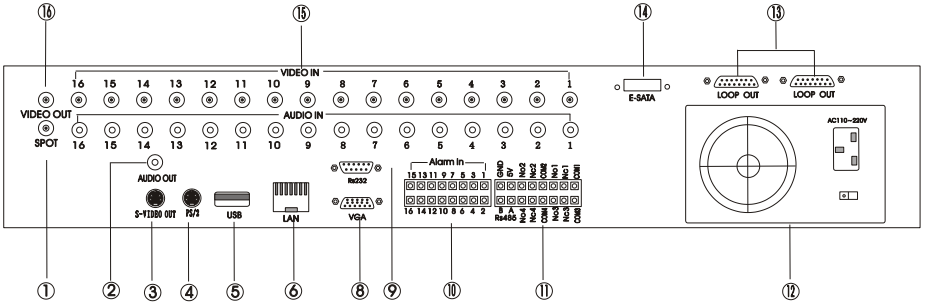


Fig 2.5 Rear Panel for 16-channel DVR

Item	Name	Description
1	Spot out	Connect to monitor as an AUX output channel by channel. Only video display, does not show menu
2	Audio out	Audio output, connect to the speaker
3	S-video	S-Video output, connect to monitor
4	PS/2 Port	Connection for PS/2 mouse
5	USB MOUSE	Connection for USB mouse
6	RJ45 Port	Connect to router for network/internet access
8	VGA Port	VGA output, connect to monitor
9	COM Port	For debugging or serial input
10	ALARM IN	Connect to external sensor 1-16. Please refer to 2.3.2 Installing Sensor Alarm
11	ALARM OUT	Relay output 1-4. Connect to external alarm. Please refer to 2.3.2 Installing Sensor Alarm
12	Power	Power on/off
13	LOOP OUT	For outputting each channel's image independently
14	e-SATA Port	Connect to eSATA HDD for backup
15	Video in	Video input channels from 1-16
16	Video out	Connect to monitor

Table 2.3 16 Channel Rear Panel Layout

The Rear Panel Layout for 4 Channel DVR is shown as Fig 2.4 Rear 4Ch.

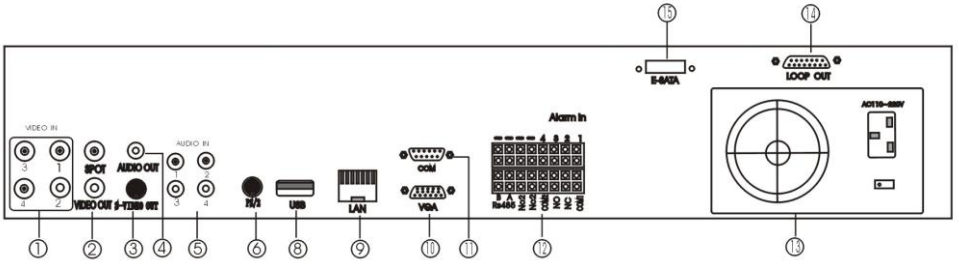


Fig 2.6 Rear Panel for 4-channel DVR

	Name	Description
1	Video in	Video input channels from 1-16
2	Video out	Connect to monitor
3	S-video	S-Video output, connect to monitor
4	Audio out	Audio output, connect to the Speaker
5	Audio in	Audio input
6	PS/2 Port	Connection for PS/2 mouse
8	USB MOUSE	Connection for USB mouse
9	RJ45 Port	Connect to router for network/internet access
10	VGA Port	VGA output, connect to monitor
11	COM Port	For debugging or serial input
12	ALARM IN/OUT	External sensor input 1-4 Relay output 1-4. Connect to external alarm. Please refer to 2.3.2 Installing Sensor Alarm
13	Power	Power on/off
14	Loop out	For outputting each channel's image independently
15	e-SATA Port	Connect to eSATA HDD for backup

Tab 2.4 4 Channel Rear Panel Layout

*Notice: The resolution of VGA output is 800*600/60Hz. If connected through VGA port, please assure your display supports the display mode. (For most of LCD screens, they can adapt to it automatically without manual adjustment)*

2.3.2 Installing Sensor Alarm

The DVR has 4, 8, or 16 channel alarm input (depending on model) and four-channel alarm output.

Alarm Input:

The alarm input is triggered by electric level (High: 5V, Low: 0V). Users can connect external sensors, like gas detector, smoke detector and infrared detector. Once the DVR detects that the electric level meets the setting user's make, it will trigger DVR recording or alarm out.

For example, a sensor is connected to alarm input1. Cable A and B will be connected once the sensor detects an event. Users set Device type as NC (Normal Close). It will input +5V (high level) to input1 when events happen. DVR is triggered.

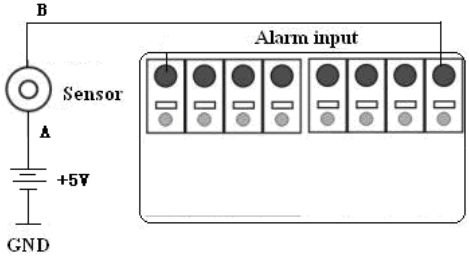


Fig 2.7 Sensor Connection

Alarm output:

The DVR has 4-channel relay alarm output, which just gives on/off signal to external alarm. The status of these pin are illustrated as Fig. 2.7.

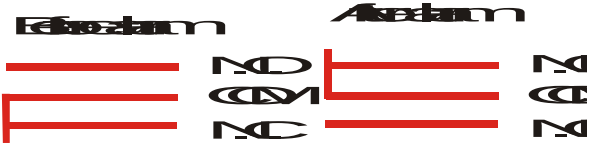


Fig 2.8 Relay Output Status

Users need connect their alarm according to the NO or NC type of the alarm. One connection example as Fig 2.8

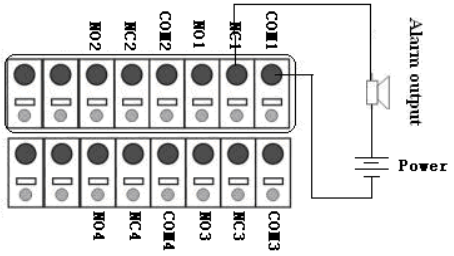


Fig 2.9 Alarm Output Connection

2.4 Remote Control

The remote control uses two AAA size batteries and works after loading batteries as follows:

STEP1 Open the battery cover of the Remote Control
STEP2 Insert batteries. Please make sure the poles (+ and -) are correct
STEP3 Replace the battery cover

***Notice**: If the remote control does not work, check the following:*

1. Check the poles of the batteries.

2. Check the remaining charge in the batteries.

3. Check to see if the sensor on the remote or the DVR is blocked or dirty.

If it still does not work, Please contact Q-See to get a new remote control.

The layout of the remote control is shown in Fig 2.10 Remote Control

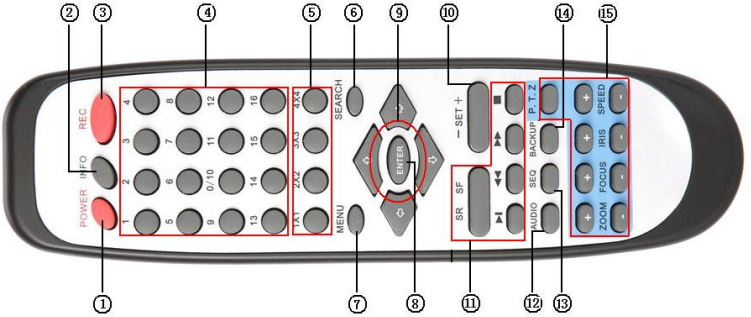


Fig 2.10 Remote Control

Item	Name	Function
1	Power Button	Soft off switch to stop firmware running. Push it before powering off the DVR.
2	INFO Button	Get information about the DVR like firmware version, HDD information
3	REC Button	To record manually
4	Number Buttons	Input numbers or choose cameras
5	Multi Screen Button	To choose multi screen display mode
6	SEARCH Button	To enter search mode
7	MENU Button	To enter menu
8	ENTER Button	To confirm the choice or setup
9	Direction Button	Move cursor in setup or pan/tilt/zoom (PTZ)
10	+/- Button	To increase or decrease the value in setup
11	Playback Control Button	To control playback, Fast forward/rewind/stop/single frame play
12	AUDIO Button	To enable audio output in live mode
13	Auto Dwell Button	To enter auto dwell mode
14	BACKUP Button	To enter backup mode
15	PTZ Control Button	To control PTZ cameras: Move camera/ZOOM/FOCUS/IRIS/SPEED control

2.5 Controlling with Mouse

2.5.1 Connect Mouse

DVR supports PS/2 or USB mouse through the ports on the rear panel, please refer to Fig 2.10 Remote Control.

***Notice**: If mouse is not detected or does not work, try the following:*

1. Unplug/re-plug several times

2. Power off/on several times

3. Try another mouse

2.5.2 Using a Mouse

The structure of the main menu is shown in Fig 2.10 Remote Control

In live Mode:

Click left button on one camera to display full screen. Click again to return to the previous screen display.

Click right button to show the control bar at the bottom of the screen as Fig 2.10 Remote Control. Here are all the control and setup options. Click right mouse again to hide the control bar.

In Setup Mode:

Click left button to enter. Click right button to cancel setup, or return to the previous screen.

If you want to input a value, move cursor to the blank and click. An input window will appear as Fig. 2.11. The menu supports number, letter and symbol input.

Fig 2.11 Digital Numbers and Letters Input Window

Users can change some values by using the mouse wheel, such as time. Move cursor onto the value, and roll the wheel when the value changes.

The menu supports mouse drag. i.e. Set motion detection area: click customized, hold left button and drag to set motion detection area. Set schedule: hold left button and drag to set schedule time

In playback:

Click left button to choose the options. Click right button to return to searching mode.

In backup:

Click left button to choose the options. Click right button to return to live.

In PTZ control:

Click left button to choose the buttons to control the PTZ. Click right button to return to searching mode.

CHAPTER 3 Basic Operating Instructions

3.1 Power On/Off

***Notice**: Before you power on the unit, please make sure all the connections are good.*

3.1.1 Starting

There are two ways to start the DVR. One way is to connect the power source, switch on the power button near the power port on the rear panel, and the system will start up. The other is to start by the *Power* button on the front panel, (this method can only be used if the system is not turned off), please press *Power* button 3 to 5 seconds, the system will start normally, and the screen will display Fig 3.1 System Loading.

Fig 3.1 System Loading

Following that, it will enter in live view with eight screens as shown below:

Fig 3.2 Preview

Symbol	Meaning	Symbol	Meaning
	Audio enabled in live mode		Audio disabled in live mode
(green)	Manual recording	(blue)	Scheduled recording
(yellow)	Motion detection recording	(red)	Alarm recording
HDD	Current working Hard Drive	Space	Size of current HDD
Free	Free space on current HDD		USB devices connected
	HDD full		

3.1.2 Close

When you shut down the system, please strictly follow shut down procedures. Users can shut down the unit using the remote control, front panel, and mouse.

By remote control:

STEP1 Press the POWER button, the screen below will appear:

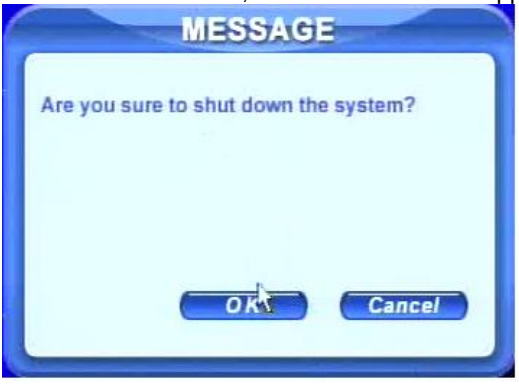


Fig 3.3 Shut down

STEP2 Choose OK. The unit will power off automatically after closing down resources

STEP3 Disconnect the power

By front panel or mouse:

STEP1 Press the ENTER button or click right mouse to show menu bar, refer to Fig 4.1 Control Bar.

STEP2 Click the Shut down button, refer to Fig 3.3 Shut down

STEP3 Click OK on the pop-up window. The unit will power off automatically after closing down resources.

STEP4 Disconnect the power

3.2 Login & User Management

Users can logout and login to the DVR system. Users cannot do any other operations except changing the multi-screen display when logged out. They are logged out when the system starts or restarts.

Login:

To log in, please press right mouse to show the control bar. Press Login, Search, or System etc. A login window will appear, asking for ID and password as in Fig 3.4 Login.

Fig 3.4 Login

***Notice**: The default login is admin and 123456.*

Change password:

Every one can change his own password.

STEP1 In login state, click Log in/out on the control bar. A window will appear with two options. One is for logout, another for password modification. Click Password, the window will appear as in Fig 3.5 Change Password:

Fig 3.5 Change Password

STEP2 Input the old password. Then input new password 2 times.
STEP3 Press OK button to change.

Add & Delete users:

This unit has a default administrator and two user groups, advanced and normal user. It supports 1 administrator and 15 users total. Administrator can add or delete other users, and change their group level. Administrator cannot be added or deleted.

Press right mouse to show the control bar. Enter Menu---->System.

STEP1 Enter USER configuration. Click Add button, please see Fig 3.6 Add User.

Fig 3.6 Add User

STEP2 Input user name and password. Choose the user group.

STEP3 Click OK button to add a new user

STEP4 Choose a user, a symbol will display at the end of the user information. Click Authority button to change the group level.

STEP5 Press Delete button to delete the user. A security window will appear as below.

STEP6 Click OK button to delete the user

Notice: *Clearification of users' rights*

Administrator: has all rights to do every thing.

Advance: all functions except entering USER to manage users

Normal: all functions except entering SYSTEM to change the settings.

The user name and password can be a combination of numbers, letters, or symbols. There must be one or more characters.

3.3 Recording

3.3.1 Record Setup

Users need to install and format a HDD, unless the unit came with a hard drive already installed, and set all the recording parameters before recording. There are four recording modes. Users can enable them simultaneously. They have different priorities as below.

Motion detection recording > Sensor recording > Manual recording > Scheduled recording

Press right mouse to show the control bar, refer to Fig 4.1 Control Bar. Enter Menu---->System.

STEP1 Enter RECORD configuration, refer to Fig 3.7 Record Setup. Select cameras.

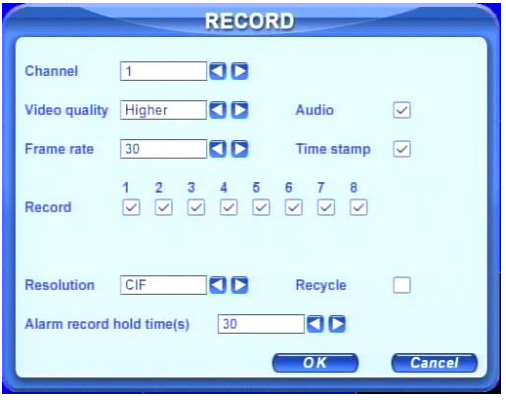


Fig 3.7 Record Setup

STEP2 Set Video quality, Frame rate, and Resolution.

STEP3 Have Audio checked if you input audio and want to record it. Check Time stamp if you want it on the recording.

STEP4 Enable recording function for cameras in Record option.

***Notice**: If camera is unchecked here, it will not record in any recording mode.*

STEP5 Set Alarm record hold time. It is for record time after alarm ends.

STEP6 Enable Recycle. It overwrites older files once HDD is full. If you have it unchecked, it will stop recording once HDD full until you reformat the drive

STEP7 Click OK to finish

***Notice**: The higher the Video quality setting, frame rate, and resolution, the more hard drive space is used per hour.*

***Notice**: This Unit supports pre-alarm recording, however, there is no option to set the pre-alarm recording time, the default is 10 seconds*

3.3.2 Manual Recording

Just press the REC button on the front panel after exiting system setup. Press the Stop button to stop recording.

You can also press the REC button on remote controller, click again to stop, or click the REC button on the control bar with mouse, click again to stop.

3.3.3 Scheduled Recording

Users can set different schedule times for every day in the week. If you want a special schedule for one day, you can use Holiday function.

STEP1 Enter SCHEDULE configuration. Select Channel and Schedule; please see Fig 3.8 Schedule Setup.

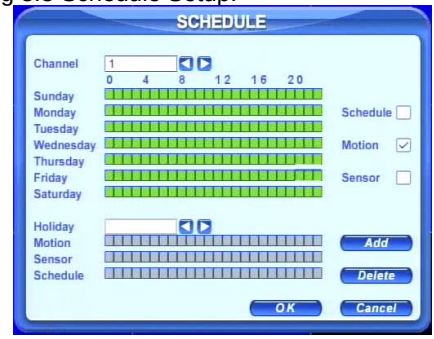


Fig 3.8 Schedule Setup

STEP2 The left column shows the 7 days of the week. The row shows the 24 hours of the day. Set the schedule time.

Green means checked. Transparence means unchecked.

STEP3 Press Add button to select the date if you want to setup a special schedule for a certain day. A window will appear as in Fig 3.9 Calendar.

Fig 3.9 Calendar

STEP4 Select the date and set the schedule time. If want to delete this special schedule, click the Delete button

STEP5 Click the OK button to finish

The DVR will automatically record when the time you set arrives.

3.3.4 Motion Detection Recording

This unit supports recording channels and PTZ linking. This means it will record on any cameras, or trigger any speed dome to go to presets or do auto cruise once motion is detected.

STEP1 Enter MOTION configuration and select camera or channel

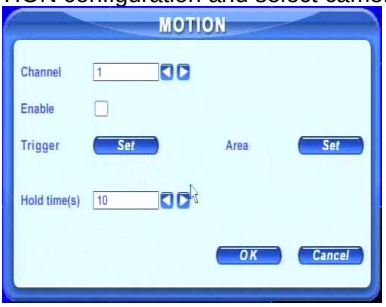


Fig 3.10 Motion Detection Setup

STEP2 Put check mark in Enable Detection box first, and then enter Area to set Sensitivity and detection Area. In detection area, red means not sensitive, which will not trigger recording, transparent means available or will trigger recording, see Fig 3.10 Motion Detection Area Setup. Sense the sensitivity can be influenced by the color and time (day or night), users can adjust its value according to the present conditions.

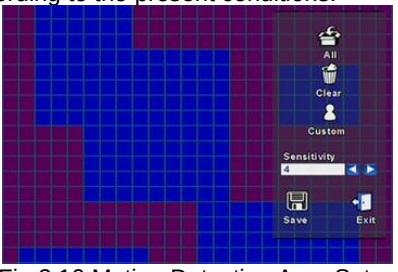


Fig 3.10 Motion Detection Area Setup

STEP3 Enter Trigger configuration, see Fig 3.11 Trigger Setup

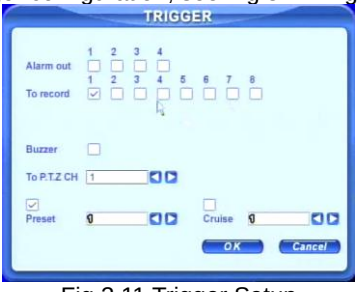


Fig 3.11 Trigger Setup

STEP4 Select alarm out and recording channels. It can trigger any alarm out and cameras to record once motion is detected.

STEP5 Enable or disable Buzzer on board. Select speed dome and enable preset or auto cruise (if you are using a PTZ camera). Press OK to save

STEP6 Set Hold time This is the length of time between two consecutive motion alarms. If a second motion is detected during Hold time, it is recognized as a continuous part of the first motion event. If a second motion is detected after hold time, this motion and the previous are recognized as two different motion events.

STEP7 Click OK to save settings

STEP8 Enter SCHEDULE configuration. Select Motion and relative cameras to set, refer to 3.3.3 Schedule Recording.

***Notice**: About preset and auto cruise (for PTZ cameras), users can only select one at a time.*

The actual post- alarm record time equals Hold time in RECORD and Hold time in MOTION

3.3.5 Alarm Recording

This unit supports recording channels and PTZ linking after alarm.

STEP1 Enter ALARM configuration, see Fig 3.12 Sensor Alarm Setup. Select cameras

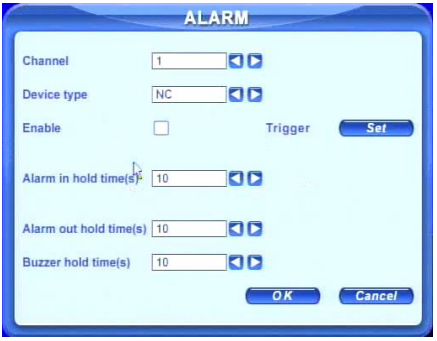


Fig 3.12 Sensor Alarm Setup

STEP2 Enable Detection first (put checkmark in Enable box). Set Device type.

STEP3 Enter Trigger configuration. Set alarm out, recording cameras and linked PTZ (if using PTZ cameras), refer to 3.3.4 Motion Detection Recording STEP4-5

STEP4 Set Alarm in hold time. This is the length of time between two consecutive alarms. This is similar to Hold time in MOTION configuration (3.3.4 Step6).

STEP5 Set Alarm out hold time and Buzzer hold time. Click OK to save settings.

STEP6 Enter SCHEDULE configuration. Select Sensor and relative cameras to set, refer to 3.3.3 Scheduled Recording.

***Notice**: Regarding preset and auto cruise (for PTZ cameras), users can only select one at a time.*

The actual post alarm record time equals Hold time in RECORD and Hold time in ALARM

3.4 Playback

This unit supports time search and event search. It displays full screen or 4 screens in playback. Click right mouse to show the control bar, refer to Fig 4.1 Control Bar. Click Search, the window below will appear on screen.

Fig 3.13 Search Menu

Time Search:

STEP1 Enter Search configuration, select Time Search. A window will appear as in Fig 3.14 Calendar Search. If there are recordings in a day, the date will be highlighted.

Fig 3.14 Calendar Search

STEP2 Choose a day to time search interface, as shown in Fig 3.15 Time Search.

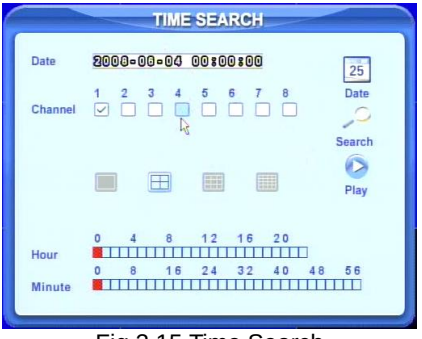


Fig 3.15 Time Search

STEP3 This unit has full screen and 4 screen playback. Select the screen display mode and the channels.

STEP4 If want to change the date, press Date button. Set hour and minutes of start time. If it recorded at that time, the boxes will show green.

STEP5 Click Play button. It will play from the time point you set.

STEP6 Click the relative buttons on the screen to do fast forward/backward, pause, stop, and change the screen mode and re-search, See Fig 3.16 Playback.

Fig 3.16 Playback

Event Search:

STEP1 Enter Search---->Event Search. The calendar window will appear as in time search

STEP2 Choose a day in event search interface, as in Fig 3.17 Event Search

Fig 3.17 Event Search

STEP3 Choose camera and event type, motion or sensor.

STEP4 Double click one video file to play.

3.5 Backup & Viewing

This unit supports backup to built-in SATA DVD Writer (optional equipment), or to USB Flash drive, through the USB port on the front panel. Users can also make backup by IE browser via internet, refer to 6.3.2 Remote Backup.

Taking USB flash backup as an example, Press right mouse button to show the control bar, refer to Fig 4.1 Control Bar.

At DVR location:

STEP1 Enter Backup mode, see Fig 3.18 Backup Setup

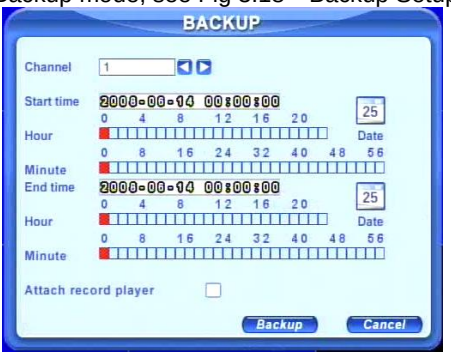


Fig 3.18 Backup Setup

STEP2 Choose the channel, and set the start and end time. Click Date button to change the date.

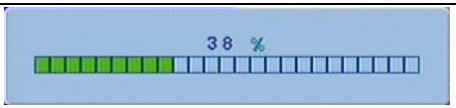
STEP3 Enable "Attach record player," it will save a special player along with the backup to play it. With this player, users can make time searches and event searches when checking the backup.

STEP4 Click OK button. A window will appear as shown in Fig 3.19 Backup Information.

Fig 3.19 Backup Information

***Notice**: If users install built-in DVD writer and USB device, it will show USB device first by default. It will show CD-ROM even though users install DVD writer*

STEP5 Press OK button. It will begin to write video from HDD inside DVR to backup device, and show the process as shown below.



STEP6 It will show “Backup complete” after finished, as shown below.

Check & View:

Users can view the backup with the third party software like realplayer, and Windows Media Player directly in addition to the special software attached with backup. Below are the steps of viewing the backup with the special software.

STEP1 Move the backup device or disc to a computer. Enter the backup folder and open the viewer.

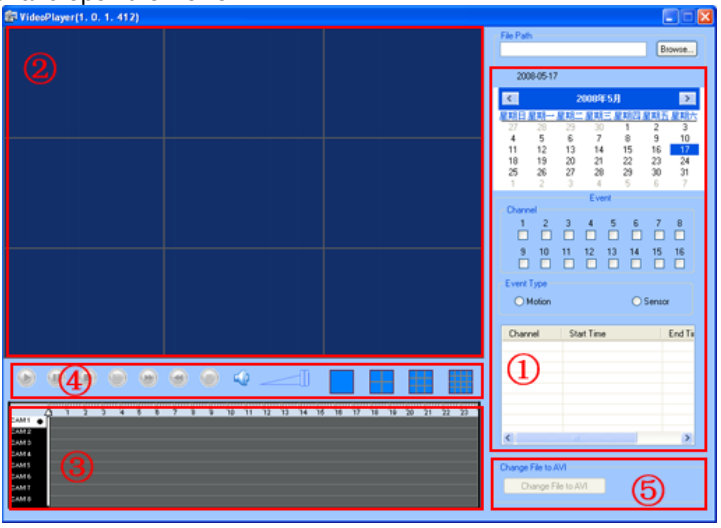


Fig 3.20 Backup Player

① Search area

② video display area

③ Video data area

④ Control area

⑤ AVI converting

STEP2 Click Browse to choose the folder which contains the video

backup, as in Fig 3.21 Choose Backup Folder.

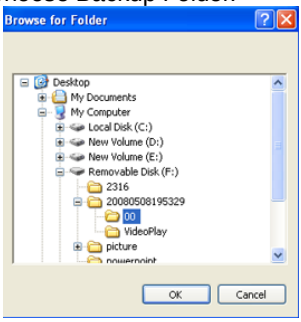


Fig 3.21 Choose Backup Folder

STEP3 Set the date and channels. It will show the recorded video in area ③ with green light at the bottom as shown in Fig 3.22 Backup Data Search.

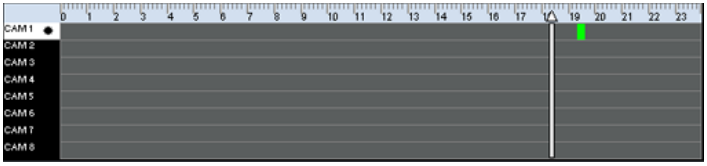


Fig 3.22 Backup Data Search

If using event search, it will list event files at the bottom of area①

STEP4 Drag the slide bar to the start time point, click play button to view. It supports multi screen display. Users can do fast forward, backward, record, play audio etc, as below.

Fig 3.23 Play Backup Files

Index	Definition	Index	Definition	Index	Definition	Index	Definition
1	Play	2	Pause	3	Stop	4	Next frame
5	Forward/ Rewind	6	Take picture	7	Volume	8	Screen mode

Tab 3.1 Backup View Control

STEP5 DVR supports AVI conversion. Click “Change File to AVI”. The converter will appear.

STEP6 Click Browse to choose the folder that contains the video backup first. Set the start/end time, select the channels, and then Click search button. It will show backup files in the file display area as in Fig 3.24 AVI Converter:

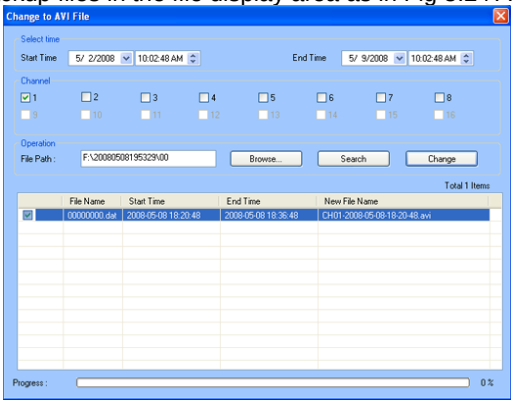


Fig 3.24 AVI Converter

STEP7 Select the files. Click Change button, it will start converting the files and show the process at the bottom.

STEP8 It is finished when the process shows 100%. Users can play the AVI files with a third party player directly.

To backup over a network, please refer to 6.3.2 Remote Backup.

3.6 PTZ Control

Connect speed domes to the DVR via RS485 first, refer to 2.3.1 Rear Panel . In addition, make sure the speed dome has the protocols this DVR supports and set the parameters according to its manual.

STEP1 Press right mouse to show the control bar. Enter Menu---->System--->P.T.Z, see Fig 3.25.

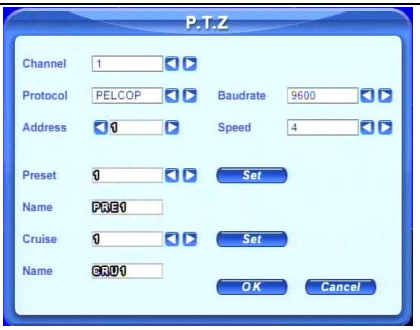


Fig 3.25 PTZ Setup

STEP2 Set protocol, baud rate, address according to the parameters of the speed dome.

STEP3 Click Set button at right of Preset. Here users can setup presets (see Fig 3.26 Set Presets), and adjust the speed dome. Select a preset and click Save to a preset. Users can set up to128 presets.

Fig 3.26 Set Presets

STEP4 Click Set button at right of Cruise. Here users can set cruise track, as Fig 3.27 Set Cruise. Choose the preset, set stay time of every preset. Click + button to add the preset to the left preset for cruise track.

Fig 3.27 Set Cruise

STEP5 Select a preset in left preset list, click – button to delete the preset.

Click ↑,↓,↑,↓ to adjust the sequence of the presets in the auto cruise. Click *Save* to save and return to the previous interface.

STEP6 Click button to save and exit. Press right mouse button to show the control bar. Click PTZ to enter PTZ control, shown as Fig 3.28 PTZ Control.

Fig 3.28 PTZ Control

STEP7 Select the speed dome. Click the direction buttons to move the camera. Click the relative + and – buttons to adjust zoom, focus, IRIS and speed. Click □ button to stop the change.

STEP8 Select the preset; the speed dome will go to the point directly. Select Cruise, it will do auto cruise.

CHAPTER 4 Menu Setup Guide

4.1 Menu Navigation

Menu	Option	Menu	Option
Basic	Device name & ID Video format Language Date & time setup Live audio switch Authorization check switch	Live	Camera name Camera mask Name & time switch SPOT out switch Color adjustment
Record	Video quality Frame rate Record switch Resolution Recycle switch Post alarm record time	Schedule	Recording schedule Motion schedule Sensor schedule
Alarm	Alarm Switch Sensor type Alarm out & out time setup Recorded cameras and PTZ linking	Motion	Motion switch Sensitivity & detection area setup Alarm out & out time setup Recorded cameras and PTZ linking
Network	HTTP & server ports IP address setup PPPoE Network video setup DDNS	PTZ	Protocol, baud rate and address Speed setup Presets setup Cruise setup
User	Add users Delete users Change authorization	Tools	Disk manager Update Load default

Table 4.1 Menu Navigation

4.2 Main Menu Setup

Click right mouse, or press ENTER button on the front panel, the control bar will show on the bottom of the screen as Fig 4.1 Control Bar.

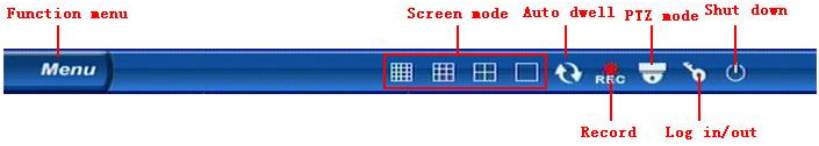


Fig 4.1 Control Bar

Move the cursor to Menu and click, the option menu will show as Fig 4.2 Pop up Menu

Fig 4.2 Pop up Menu

Select System. A graphic user interface will show as Fig 4.3 System Setup.

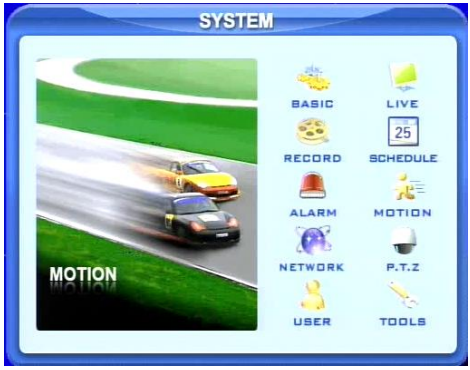


Fig 4.3 System Setup

If you press the MENU button on the front panel or remote control the interface above will also appear.

Notice: *Only administrator and advance user can enter system setup and do setup.*
The system needs to reboot after some parameters, like video format, are changed.

4.2.1 Basic Configuration

Click BASIC to enter **B**asic Configuration shown as Fig. 4.4. Basic Configuration

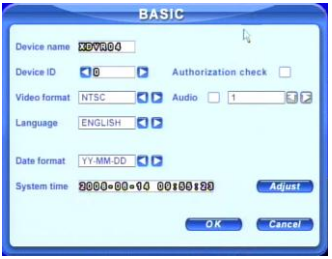


Fig 4.4 Basic Configuration

Here users can set video system, menu language, audio, time and authorization check. The following are explanations of each option.

Device name: The name of the unit. It may display on the client end or CMS, which helps users to recognize the unit remotely.

Device ID: It is used to identify multiple devices at the same place. Users can manage them by remote control by giving each device its own ID number.

Video format: Options are PAL and NTSC. Users make the choice according to the video format of the cameras.

Language: set the menu language, customer terminal can not change it.

Authorization check: If checked system needs user name and password when user wants to entire system setup, playback, backup etc.

Audio: Enable audio in live view. Users can choose channel for audio.

Date format: Three formats, YY-MM-DD, DD-MM-YY, MM-DD-YY.

System time: Set the time. If the unit is recording, users cannot change the time. When recording, click Adjust button, a security window will appear.

4.2.2 Live Configuration

Click LIVE to enter Live Configuration shown as Fig 4.5 Live Configuration

Fig 4.5 Live Configuration

Here users can set system to display camera name and time, picture color and hide cameras. The following are the explanations of each option.

Camera name: Set camera name. It can be a combination of numbers, letters and symbols.

Show name: Display camera name in live view.

Show time: Display the time in live view.

Dwell time: It is available for both Sequence and SPOT simultaneously. This unit has 2-channel video output, refer to 2.3.1 Rear Panel . One is main output, and the other is spot output. Users can set the display time of cameras in auto dwell and spot out.

SPOT enable: Enable spot output.

Color: Click Set button, a window will appear shown as Fig 4.6 Color Adjustment.

Fig 4.6 Color Adjustment

Adjust Brightness, Hue, Saturation, and Contrast in live view here.

Default: Set the color to the default value.

4.2.3 Record Configuration

Click RECORD to enter Record Configuration shown as Fig 4.7 Record Configuration.

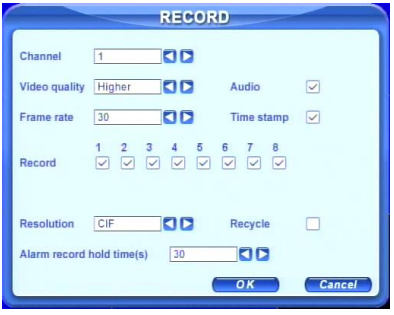


Fig 4.7 Record Configuration

Here users can set record quality, frame rate, resolution, and hard drive recycle. The following are the explanations of each option.

Video quality: There are five options from lowest to highest. The higher the value is, the clearer the recorded picture is, but the more hard drive is taken up.

Frame rate: Set recording frame rate.

Audio: Enable audio to record.

Time stamp: Record the current time on the video file if checked.

Record: Switch on/off recording function for every camera. The video from the camera will only be recorded if checked here, then you can use manual, scheduled, motion detection, and sensor alarm recording.

Resolution: DVR can support CIF and D1. Currently only CIF option is available.

Alarm record hold time(s): set the post recording time after alarm event ends. There are 4 options, 30, 60, 120, and 180 seconds.

Recycle: enable hard drive recycling. If boxed is not checked DVR will stop recording when HDD is full, if checked oldest files will be overwritten by new ones.

***Notice**: Video quality, frame rate and resolution are closely related to hard drive storage space. The higher the values are, the higher the bit rate and the more storage space that is taken up by the files.*

4.2.4 Schedule Configuration

Click SCHEDULE to enter Schedule Configuration as Fig 4.8 Schedule Configuration.

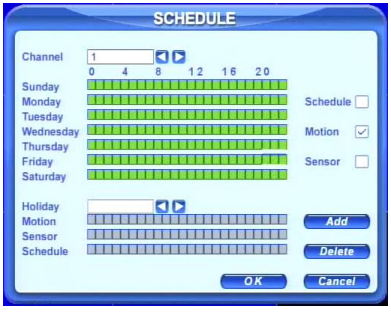


Fig 4.8 Schedule Configuration

Here users can set schedule for scheduled, motion detection, and sensor alarm recording respectively. The following are the explanations of each option.

Schedule, Motion and Sensor: refer to recording on a regular schedule, motion schedule and alarm schedule respectively.

The left column shows the 7 days of the week from Sunday to Saturday. The row refers to the 24 hours in a day. Click the boxes or use the mouse to drag to set the schedule time. Green means checked. Transparent means unchecked.

Add: Users can set a schedule for a certain day by date. Click Add to add date as in Fig 3.9 Calendar.

Delete: Delete holiday schedule.

4.2.5 Alarm Configuration

Click ALARM to enter Alarm Configuration shown as Fig 4.9 Alarm Configuration.

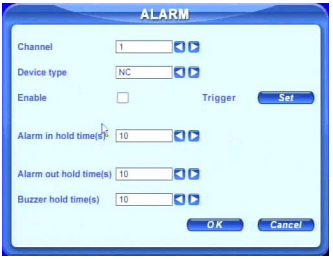


Fig 4.9 Alarm Configuration

Here users can set sensor type, alarm trigger and alarm hold time. The following are the explanations of each option.

Device type: NC and NO (Normal Close and Normal Open). Set the value according to the alarm signal type of the sensors.

Enable: Enable sensor alarm.

Trigger: Set alarm output, recording channel and speed dome linking (for PTZ cameras). Click Set button, a window will appear shown as Fig 4.10 Alarm Out Configuration.

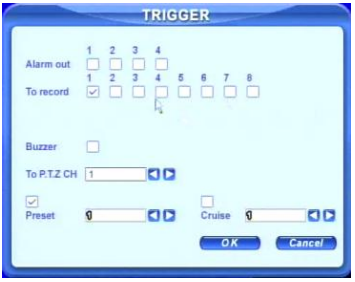


Fig 4.10 Alarm Out Configuration

Alarm out: Set relay alarm out channel. You can select any alarm channels.

To record: Set recording channels. You can select any record channels. It will record the cameras you choose here when alarm is triggered.

Buzzer: Enable buzzer on board for alarm.

To P.T.Z CH: Set linked preset and cruise for alarm if you have PTZ cameras. You can select any channel or multiple channels as linked channels.

Alarm in holding time(s): The interval time between two consecutive sensor alarms. If a second alarm is detected within the Hold time, it is recognized as a continuation of the previous alarm. If a second alarm is detected after hold time, this alarm and the previous are recognized as two different alarm events.

Alarm out holding time(s): Set relay alarm out time after alarm is triggered.

Buzzer holding time(s): Set on board buzzer time after alarm is triggered.

4.2.6 Motion Configuration

Click MOTION to enter Motion Configuration as Fig 4.11 Motion Configuration.

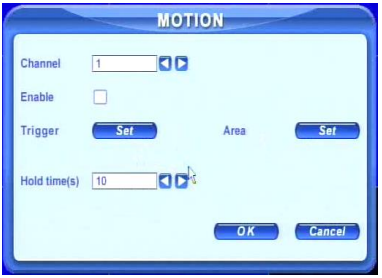


Fig 4.11 Motion Configuration

Here users can set motion sensitivity, detection area, and alarm out. The following are the Explanations of each option.

Enable: Enable motion detection.

Trigger: Setup similar to that of sensor alarm. Do not link motion to the channel where the speed dome is located because the constant motion of the speed dome will always trigger motion recording. For example, if the speed dome is on channel 1 do not setup motion detection for channel 1, you can set it for 2 through 16.

Area: Set sensitivity and motion detection area. System supports multiple detection areas as shown in Fig 4.12 Detection Area Configuration. Click the blocks or drag mouse to enable or disable. Red means unchecked or inactive, transparent (Blue) means available. Click *Save* to save and exit.

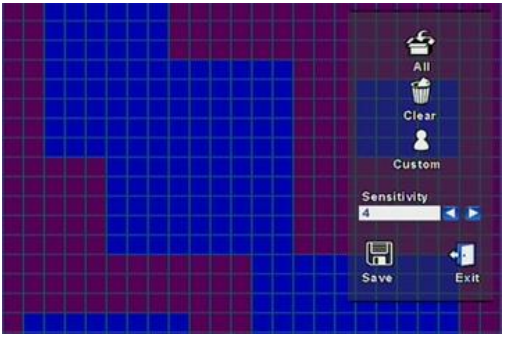


Fig 4.12 Detection Area Configuration

Sensitivity: Set detection sensitivity from 1-8. The default is 4.

Exit: quit without saving

Holding time(s): the amount of time between two consecutive motion events, similar with that of sensor alarm.

4.2.7 Network Configuration

Click NETWORK to enter Network Configuration shown as Fig 4.13 Network Configuration.

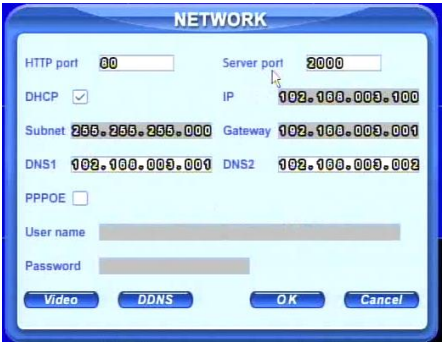


Fig 4.13 Network Configuration

This unit supports DHCP, PPPoE, and DDNS. Users enable network function, and configure IP address, DDNS, and transmission video parameters here. The following are the explanation of each option.

HTTP port: The default is 80. If users change the value, they need to add the port number when typing IP address in IE address blank. i.e. set HTTP port to 82, IP address to 192.168.0.25. Users need input http://192.168.0.25:82 in IE browser.

Server port: Communication port

DHCP: enable DHCP. For this feature work, you need to enable DHCP in the router or virtual server. The unit will get IP address automatically from the router instead of inputting IP, Subnet, and Gateway manually.

IP, Subnet, Gateway, DNS1 and 2: IP address information. If users do not enable DHCP, it is necessary to input the value manually here.

PPPoE: Enable PPPoE. If users connect the DVR to internet directly by ADSL, not through a router or a virtual server, please enable it.

User name, Password: Account information of PPPoE. Input what you get from your ISP.

Click DDNS, a window will appear shown as Fig 4.14 DDNS Configuration. The DVR currently supports DNS2P and 88IP. Users need to register at www.dns2p.com or www.88IP.net, then input register ID and password here. Click OK button. The unit will connect through DNS2P or 88IP domain name.

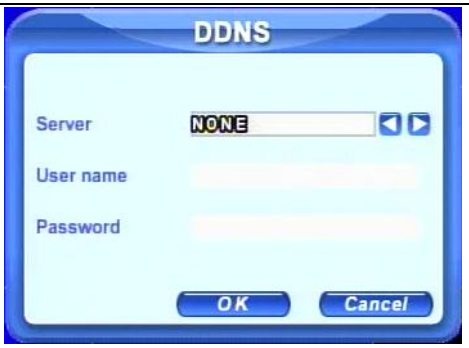


Fig 4.14 DDNS Configuration

Server: Select DDNS server.

User name and Password: Input account information.

This unit supports dual stream. Users can set picture quality, frame rate, and resolution separately for network, according to the network bandwidth. Click Video to enter the configuration interface shown as Fig 4.15 Network Video Configuration.

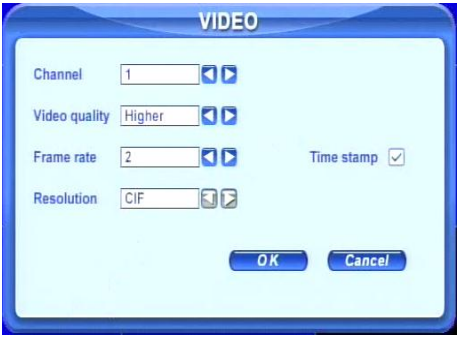


Fig 4.15 Network Video Configuration

Video quality: Network picture quality.

Frame rate: There are 3 options, 1, 2 and 3 fps.

Resolution: Currently only supports CIF.

Time stamp: Check to display time in the image.

4.2.8 P.T.Z Configuration

Click P.T.Z to enter PTZ Configuration as Fig 4.16 PTZ Configuration.

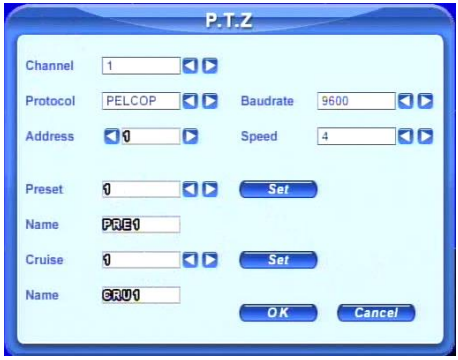


Fig 4.16 PTZ Configuration

Here users can set protocol, baud rate, address, presets, and auto cruise tracks. The following are the explanations of each option.

Protocol, Baud rate, Address: Please set the values according to the settings of the speed dome.

Speed: Set the speed of speed domes.

Preset, Name: Select a preset and rename it. Click *Set*, a window will appear as shown in Fig. 4.17. Select a preset to adjust the speed dome. Click *Save* button to save it and exit.

Fig 4.17 Set Presets

Cruise, Name: Select a cruise track and rename it. Click Set in Cruise row. A window will appear as in 3.6 PTZ Control.

Notice: *You can set a total of 128 presets and 32 cruise tracks.*

4.2.9 User Configuration

Click USER to enter User Management interface shown as Fig 4.18 User Configuration.

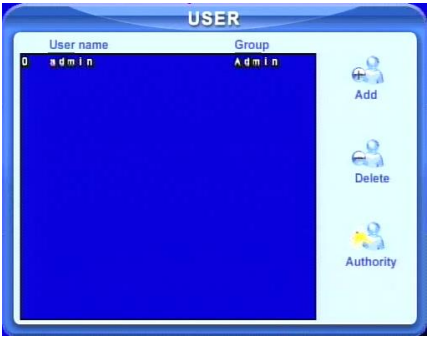


Fig 4.18 User Configuration

Administrator can add, delete users, and change their authorizations. Please refer to 3.2 Login & User Management.

Notice: *System supports one administrator and a maximum of 15 users.*

4.2.10 Tools Configuration

Click TOOLS to enter Tools Configuration shown as Fig 4.19 Tools Manager.

Fig 4.19 Tools Manager

Disk manager: Please refer to 5.1 Formatting Hard D.

Update: Please refer to 5.2 Updating Firmware.

Load default: Please refer to 5.3 Loading Default Setup.

CHAPTER 5 Managing the DVR

5.1 Formatting Hard Drives

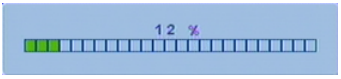
If you want to record, it is necessary to format the hard disk first. If not formatted, it will show the position of the disk, free space, and total space showing as 0M at the bottom of the main viewing screen.

STEP1 Enter TOOLS Configuration, refer to 4.2.10 Tools Configuration. Press Disk Manager, a window will pop up shown as Fig 5.1 Disk Manager.

Fig 5.1 Disk Manager

STEP2 If a disk has never been formatted, Status will show “new”. Select the hard disk and press the Format button to begin.

STEP3 A security window will remind user that this will delete all data on HDD. Press OK to continue. A progress bar will display on the screen as shown below.



STEP4 It will return to the previous screen automatically when finished and status will show “normal” after being formatted.

Notice: *All recorded files will be lost during formatting.*

5.2 Updating Firmware

The DVR only supports USB update. Firmware updates, when written, will be available from Q-See. Users can check USB information in disk manager, please refer to Fig 5.1 Disk Manager.

STEP1 Plug an USB flash drive into a computer. Copy the firmware to the flash drive. The extension of the firmware is tar.

STEP2 Move the USB flash drive to the DVR. Enter TOOLS Configuration, refer to 4.2.10 Tools Configuration.

STEP3 Click Update. A window will appear, which reminds users that it will automatically load default settings after update.

STEP4 Press OK to begin. The progress bar will display on the screen during update.

STEP5 After finished, the unit needs restart.

***Notice**: If a "no device" or "no file" error appears, it is possible that the USB device is incompatible. Please try another USB flash drive.*

Please be patient. It will take 2-3 minutes to update.

5.3 Loading Default Setup

The DVR has different setup blocks, like Basic, Record, Schedule, Motion etc. Users can choose any block to restore default setup, see Fig 5.2 Reset Blocks.

Fig 5.2 Reset Blocks

STEP1 Enter TOOLS configuration, refer to 4.2.10 Tools Configuration.
STEP2 Click Load default. Select setup blocks; please refer to Fig 5.2 Reset Blocks.
STEP3 Press OK to reset to default. It will return to TOOLS interface when finished.

5.4 Checking System Information

To check system information like firmware version, IP address, etc.

STEP1 Press right mouse button to show the control bar. Click Menu, refer to Fig 4.2 Pop up Menu.
STEP2 Click Info, the window below will appear.

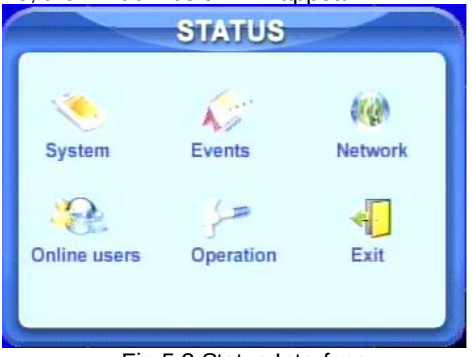


Fig 5.3 Status Interface

STEP3 Click System, the window below will display. Check firmware version, recording parameters here.

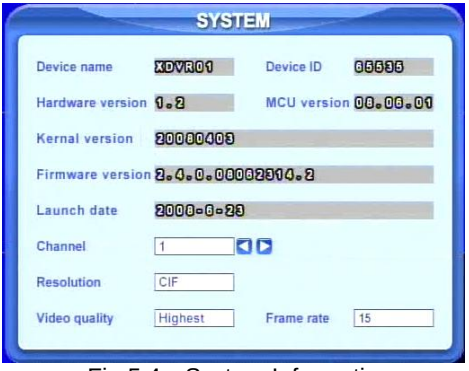


Fig 5.4 System Information.

STEP4 Return to the previous interface, and click Network. The window below will display. Check IP address, DVR Mac address, network video quality.

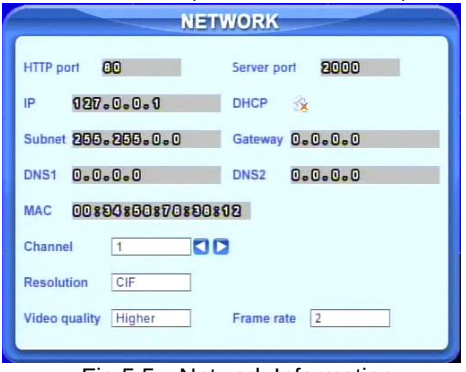


Fig 5.5 Network Information.

5.5 Checking System Log

This unit maintains a system log. It records its working state and operation automatically. Moreover, it divides the record into two groups: events and operation. The form below shows the details of the two groups.

Group	Details
Events	Motion, Video Loss, Sensor
Operation	Delete File, Lock File, Search, Login, Enable check, Boot, Shutdown, Reset, Start Record, Stop Record, Setup Basic, Setup Live, Setup Record, Setup Schedule, Setup Alarm, Setup Network, Setup P.T.Z

Tab 5.1 Details of System Log

STEP1 Press right mouse button to show the control bar. Click Menu---->Status---->Events, the window below will appear.

Fig 5.6 Events LOG

STEP2 Click Date to change date using a calendar. Click Type to select the event type. Then click Search button. This will refresh the event list.

STEP3 Click ←, ←, →, → to do page down or page up

STEP4 Click right mouse to return to the previous interface. Click Operation to search operation Log

Fig 5.7 Operation Log

STEP5 The operatiion is similar to searching events log.

Notice: *The log files are saved to the HDD inside. If HDD is not installed, it will not record any events. The number of log files is unlimited.*

5.6 Checking On-line Network Users

Press right mouse button to show the control bar. Click Menu---->Online users. It will show the details of the current connections as shown below.

Fig 5.8 Details of Current Network Connections

5.7 Locking & Deleting Files

Users can control all video files, including locking and deleting them. Once users lock an important file, it cannot be overwritten or deleted, but the locked files can still be cleared by formatting the hard drive.

STEP1 Press right mouse button to show the control bar. Click Menu, refer to Fig 4.2 Pop up Menu.

STEP2 Click Search----->File manager, the window below will appear.

Fig 5.9 File Manager

STEP3 Click Date to change date using a calendar, click Search to refresh the list. The files found will be listed in the file area of file manager at bottom. It shows the details of every file, like start/end time, lock state.

STEP4 Select the files and click Lock, it will lock the selected files. At this time, a letter “L” will display at the end of the file rows as in Fig 5.9 File Manager.

STEP5 Select any files which are unlocked, click Delete. A warning window will display. Click Ok to delete them.

CHAPTER 6 Remote Surveillance

6.1 Accessing the DVR Remotely

To view remotely the DVR must have the network configuration setup and then connect with LAN or internet. Please refer to 4.2.7 Network Configuration.

This unit supports IE browser, no client software is installed. In addition, it supports XP and Vista.

6.1.1 Accessing the DVR on LAN (through a network)

STEP1 Input IP address, Subnet, Gateway. If using DHCP, please enable DHCP in both the DVR and router. To enter a static IP address in the DVR go to the run option on a computer attached to the same router as the DVR and type cmd to get to a command prompt. Then at the cursor type ipconfig to get the network configuration of the computer which will include the IP address of the computer, the gateway, which is the IP address of the router, and the subnet mask. You will assign the DVR the same gateway and subnet mask as the computer and will assign the DVR an IP address that will have the same first 3 sets of numbers as the gateway, but the fourth set of numbers has to be different then any other device attached to the router. If the forth set of numbers on the computer's IP is a 2 digit number, you probably want to assign the computer a forth number of 100 or higher, if the computer's IP address ends in number in the 100s then you probably want to assign the DVR a forth number of 200.

STEP2 Enter Video to set network video parameters like resolution, frame rate etc.

STEP3 Open IE browser on a computer on the same LAN. Input the IP address of the DVR in IE address blank and enter.

STEP4 IE will download an ActiveX control automatically. Then a window pops up and asks for user name and password.

Notice: *If you cannot download and install ActiveX, please r*efer to Appendix A FAQ Q7.

STEP5 Input name and password correctly, and enter. It will display the screen shown below.

Fig 6.1 View with IE browser

***Notice**: If you use a HTTP port other then 80, you need to add the port number after the IP address. For example, if you set the HTTP port as 82, you need to enter the IP address as 192.168.0.25:82.*

User name and password here are the same as that used on the DVR. The default is admin and 123456.

6.1.2 Accessing the DVR on WAN (over the internet)

There are two ways that the DVR can be accessed over the internet.

1. Connect the DVR to internet through a router or virtual server.

STEP1 Input IP address, Subnet, Gateway. If using DHCP, please enable DHCP in both the DVR and router. If using a static IP address for the DVR then follow instructions in 6.1.1 STEP1

STEP2 Enter Video to set network video parameters like resolution, frame rate etc.

STEP3 Forward IP address and port number in Virtual Server setup of the router or virtual server. You can find instructions on how to do this in the router manual. You can also find instructions for port forwarding for most popular routers on the website http://www.portforward.com. On this website click on the orange "Routers" link in the second paragraph, then find the brand and model of your router on the list and click on the link. On the next page click on the orange "Default Guide" link, this will take you to the port forwarding instructions for your router. Close firewalls in Windows and in the router if applicable.

STEP4 If you are using a dynamic IP address for internet access you may want to use a dynamic domain name To do so you would need to apply for a domain name in a DNS server supported by the DVR or router. Then add this information to the DVR and router.

This DVR currently only supports www.dns2p.com or www.88IP.net.

To enter the DNS information in the router, please check the router manual.

STEP5 Open IE browser, input IP address, or dynamic domain name and hit enter. If HTTP port is not 80, add the port number after IP address or domain name.

STEP6 IE will download the ActiveX control automatically. Then a window pops up and asks for user name and password.

***Notice**: If you cannot download and install ActiveX, please r*efer to Appendix A FAQ Q7.

Input name and password correctly, and enter to view.

2. Connect the DVR to internet directly through ADSL or cable router.

STEP1 Get IP address, Subnet, Gateway information from your ISP and enter it into the DVR. If using ADSL, please input user name and password, and click OK. The DVR will connect to the server and show "connection succeeds".

STEP2 Follow STEP4-7 of the connection method above.

6.2 Remote Preview

When you connect you will see remote preview interface as shown below:

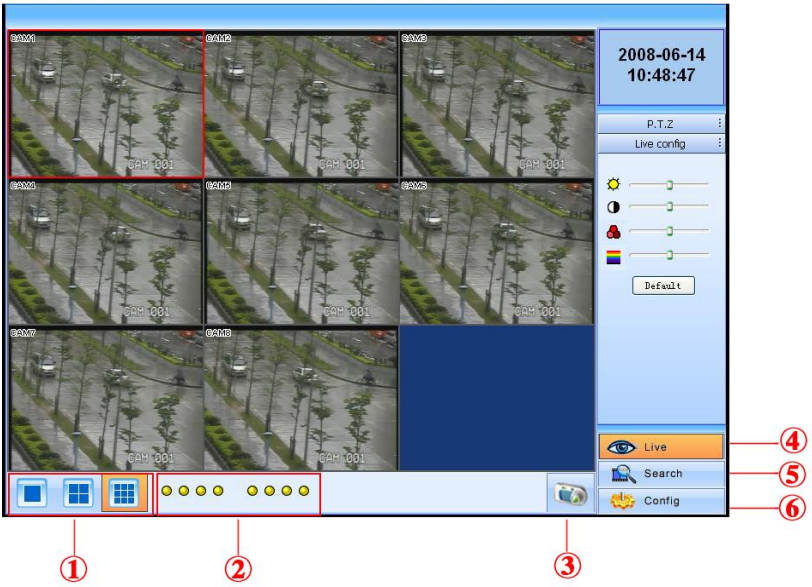


Fig 6.2 Remote Preview Interface

① Full screen, 1/4/8 screen display mode.

② Camera indicators:

③ Picture snapshot

④ Remote viewing: adjust the color of cameras and control PTZ.

⑤ Remote playback and backup: remotely playback and backup, check system log and journal. Please refer to 6.3 Remote Playback &Backup.

⑥ Remote menu setup: set up the DVR configuration remotely, refer to 6.4 Remote Menu Configuration.

④, ⑤, and ⑥ are the function blocks. When one is active, the button will show orange.

Snap pictures:

STEP1 Click on a channel to select it. Click the button, a window will appear as in Fig 6.3 Preview Snap.

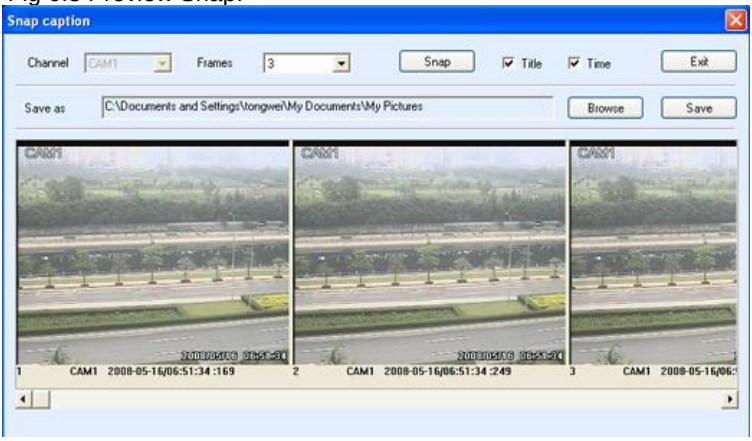


Fig 6.3 Preview Snap

STEP2 Select frames captured one at a time. Enable Title and Time, it will capture title and time for the image.
STEP3 Click Snap to capture pictures.
STEP4 Click Browse to set saving path. Click *Save* to save pictures to HDD on the computer and the saving folder window will pop up.
STEP5 Click Exit to return to live view interface.

Color adjustment:

Click on a channel to select it. Drag the slide bar to adjust Brightness, Contrast, Hue, and Saturation. Click Default to reset them to original value.

PTZ control:

Click P.T.Z to enter the window shown below. Click on the Speed Dome's channel to select it.

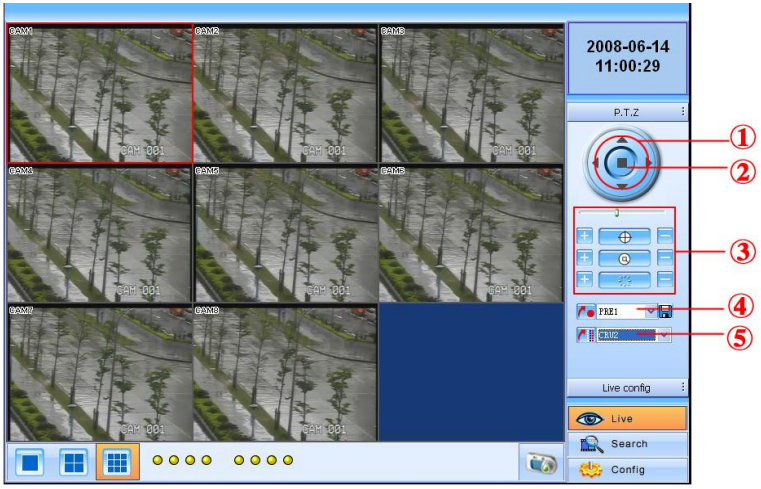


Fig 6.4 Remote PTZ control

① Move the speed dome.

② Stop adjustment.

③ Adjust zoom, focus, Iris, Speed.

④ Go to the preset. Click to name the preset.

⑤ Select and do auto cruise.

Click right mouse button, a pull-down menu will appear as below.

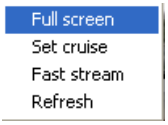


Fig 6.5 Preview Control Menu

Full screen: The picture will fill the screen without tool bar display. Double click or click right mouse button to return to the previous display.

Set cruise: Select this function to set cruise path, the window below will appear:

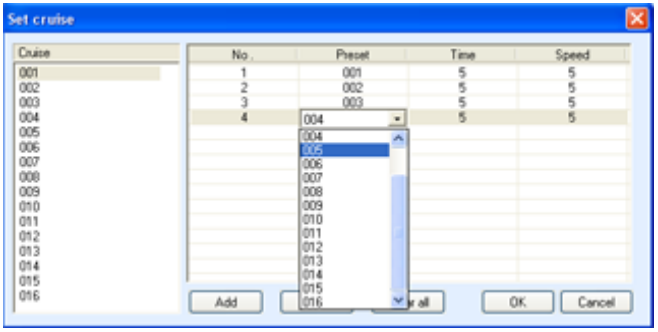


Fig 6.6 Set Cruise

Click *Add* to add presets for the selected cruise. Click the preset, a down list menu will display. Users can select presets to add. Double click Time to set display time in auto cruise. Click Delete or Clear all to delete the presets. Click OK to save and exit.

Fast stream: Enable the master stream. This DVR supports dual stream, sub stream and master stream. Sub stream has low frame rate, max 3fps for every channel, refer to 4.2.7 Network Configuration, you can use it to view the cameras if you only have low network bandwidth available.

Master stream has a higher frame rate, max 30fps for every channel. It also requires higher network bandwidth to view. Users can select the stream according to their available bandwidth.

Refresh: Update the picture on the channel. If the picture on a channel freezes due to network problems users can refresh the video.

6.3 Remote Playback &Backup

6.3.1 Remote Playback

Click Search to enter the playback and backup block as below, where users can make remote playback, remote backup and remote video file management.

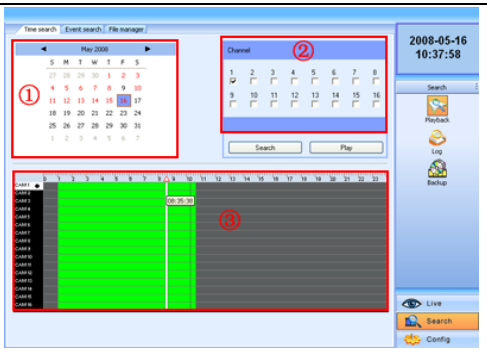


Fig 6.7 Remote Playback & Backup Interface

This DVR supports remote time search, event search and one channel playback. The above is the default interface after entering Playback & Backup block.

Using time search:

STEP1 Select the date in calendar area①, select the channel in channel area②.

STEP2 Click Search button to update the search result. All the recordings found will display in video data area③.

STEP3 In area③, the top bar refers to hours and minutes in a day. The left column refers to cameras. Drag the slide bar to a time point.

Click right mouse button on △ of the slide bar. It will zoom in 10 times, which is helpful for users to pinpoint the start time of playback accurately.

STEP4 Click Play button to do remote playback, refer to Fig 6.8 Remote Playback.

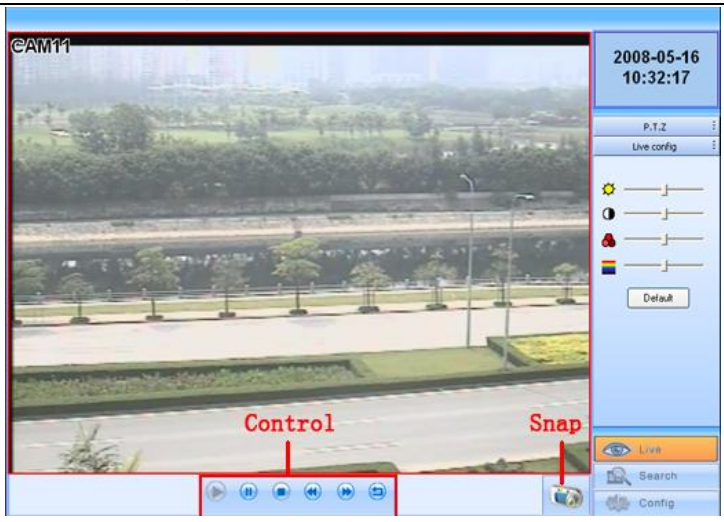


Fig 6.8 Remote Playback

STEP5 Users can go forward/backward, pause, stop playback and snap pictures. Regarding the snap feature, it is the same as that in remote view, refer to Fig 6.3 Preview Snap.

STEP6 Click to return to search interface.

Using event search:

STEP1 Click Event search, the window below will display:

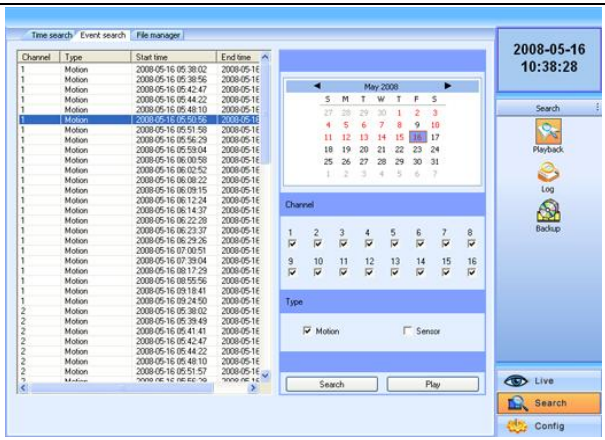


Fig 6.9 Remote Event Search

STEP2 Select the date, channel and event type. Then click Search. All the files found will be listed in the area on the left.

STEP3 Select an event, and click the Play button to do remote playback. The steps are the same as SETP5-6 of time search above.

6.3.2 Remote Backup

Users can download the recorded files from the DVR through a network. Click Backup to enter the interface shown below:

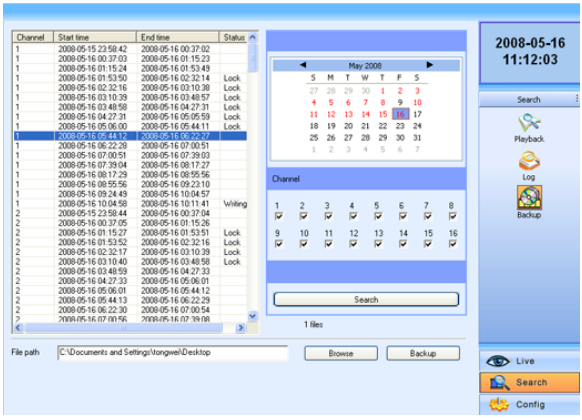


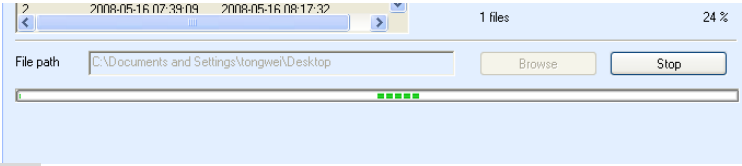
Fig 6.10 Remote Backup Interface

STEP1 Select the date and channel. Then click Search button. It will list all the files recorded on the day in the area on the left.

STEP2 Click Browse button. Set the saving path.

STEP3 Select files in left file area. Holding shift button, you can select multiple files with mouse at the same time.

STEP4 Click Backup to do remote backup. It will show the progress on the bottom of the screen as shown below:



***Notice**: the backup file is in AVI format. Users can play with the third party player directly.*

If the play cannot read the file or play it correctly then download K-lite Mega Codec Pack 4.1.0 or later from http://www.free-codecs.com/download/K_lite_codec_pack.htm

6.4 Remote Menu Configuration

Except network parameters, users can set all the parameters like resolution, schedule remotely through network, not going to the DVR. Click Setup to enter the interface as below.

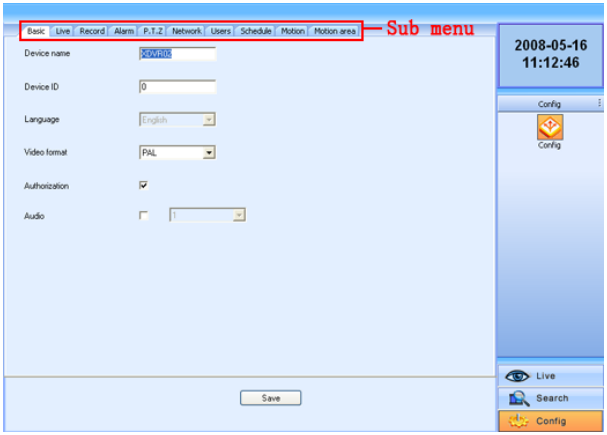
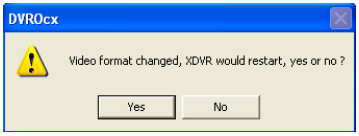


Fig 6.11 Remote Menu Setup

The sub menu lists and the options in every sub menu are similar with those on the DVR. Please refer to 4.2 Main Menu Setup to do setup.

Click *Save* to save the change. Some changes may pop up a dialog box as below and need restart.



6.5 Remote DVR Management

6.5.1 Checking System Log Remotely

Users can check system log remotely. For the details of system log, refer to Tab 5.1 Details of System Log.

STEP1 Click Search---->Log, the window below will appear. Event log search is the default interface.

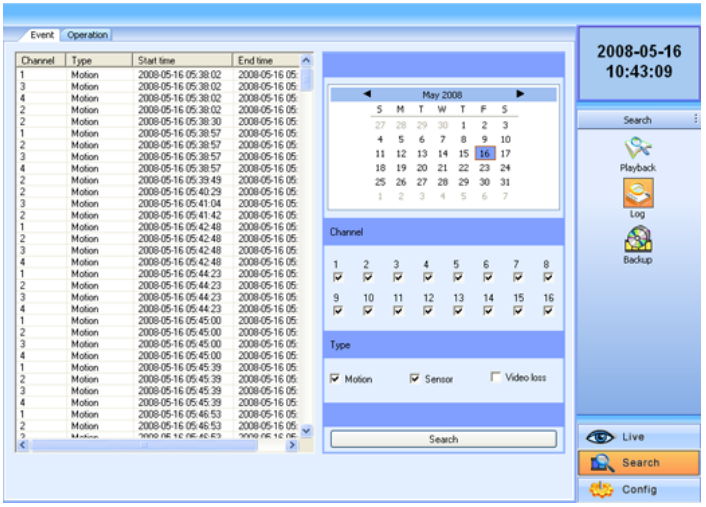


Fig 6.12 Remote System LOG Search

STEP2 Select the date, channel and event type. Then click Search.

STEP3 The entire log found will be listed in the area on the left.

STEP4 Click Operation to enter operation Log search interface

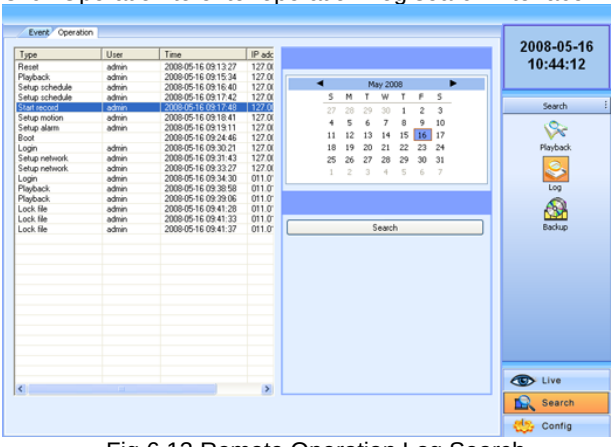


Fig 6.13 Remote Operation Log Search

STEP5 Select the date and click Search. It will list all the log files for the day in the area on the left.

6.5.2 Lock & Delete Files Remotely

Users can lock and delete video files through a network. For the details of this feature refer to 5.7 Locking & Deleting Files.

STEP1 Click Search---->Playback---->File manager, the window below will

appear:

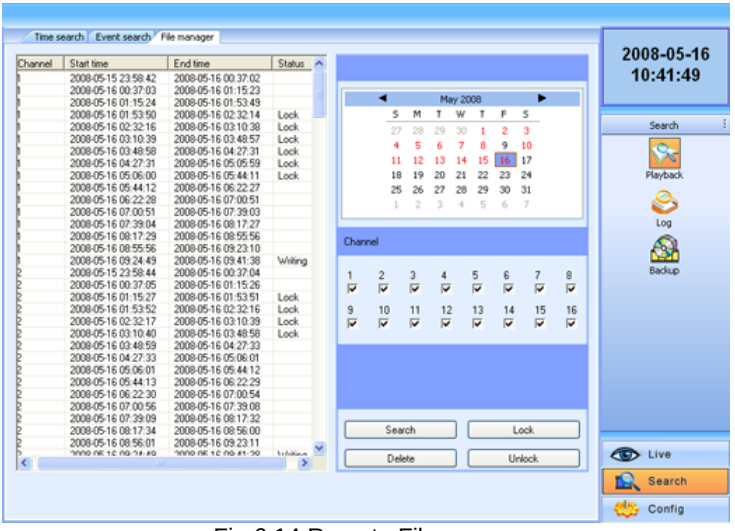


Fig 6.14 Remote File manager

STEP2 Select date and channels, and then click Search. All the files found for the day will be listed in the area on the left.

STEP3 The status will show “Lock” if the file is locked. “Writing” means the file is still being written.

STEP4 Select any files which are unlocked, click Delete. A security window will display to warn users. Click Ok to delete them.

Notice: *In all calendar search areas above, the date will be highlighted if there is data recorded.*

CHAPTER 7 Mobile Surveillance

This DVR supports mobile surveillance by PDA or smart phones with WinCE and Symbian OS running on 3G networks. We tested Dopod D600 (WM5) and Dopod S1(WM6), which work fine with the DVR.

To setup mobile surveillance, you first need to enable network service on the DVR, refer to 4.2.7 Network Configuration. Below are the instructions for using on mobile client end for the two Operating Systems.

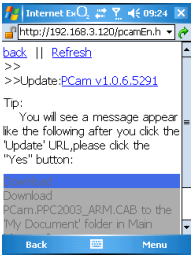
Notice: *It only supports live view by mobile devices on one channel at a time.*

7.1 Accessing by Phones with WinCE

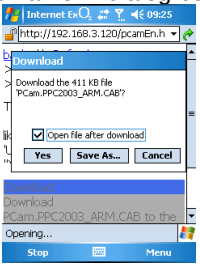
Please use PDAs or smart phones with WinCE versions supported by this unit (WM5 & WM6).

STEP1 First, activate the network access on the mobile phone, and then run "Internet Explorer".

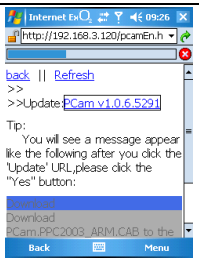
STEP2 Input the DVR server's address and the connection is made as shown below:



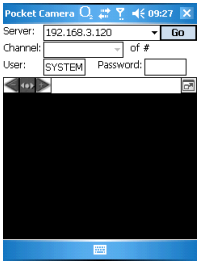
STEP3 Click on the software name. A dialog box pops up.



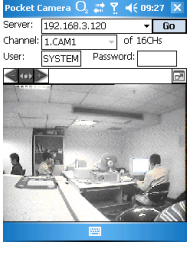
STEP4 Click "Yes" to download and install.



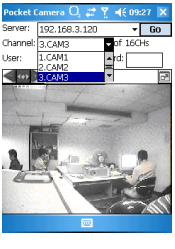
STEP5 PCam will be opened after it is installed.



STEP6 Input the server's address, ID, and password respectively in the columns of "Server", "User" and "Password", and click "Go" to login to the DVR. It will show the picture if accessed successfully.



STEP7 Camera 1 is the default display after login. Change the camera in drop down menu of "Channel".



***Notice**: User name and password here are the same with that used on the DVR. The defaults are admin and 123456.*

7.2 Accessing by Phones with Symbian

Please use the smart phones with Symbian versions supported by this unit.

STEP1 First, enable the network access on the mobile phone, and then run Web browser.

STEP2 Input the DVR server's IP address in a new-built bookmark. Click this bookmark to connect to the DVR.

STEP3 A welcome window will pop up with a link to a package download. Click "**install package**" to download.

WebCam
WELCOME
The mobile phone was detected running under Symbian OS. We recommend that you download this install package for installing and execution.
SuperDVR components
Options
Close

STEP4 The security windows will pop up after downloading and ask if you want to install the package. Click YES to install.

STEP5 A SCam shortcut icon appears on the system menu after finishing.

STEP6 Run SCam program.

STEP7 Click Options--->Settings to enter login interface.

STEP8 Input the public IP address, ID and password respectively, and click OK to login to the DVR.

STEP9 It will show the camera after accessing successfully.

***Notice**: User name and password here are the same as those used on the DVR. The defaults are admin and 123456.*

Appendix A FAQ

Q1. Why doesn't the DVR start after connecting the power?

a. The adapter may be damaged. Please try another adapter.

b. The adapter may not be providing enough power. Please remove the HDD to to see if it starts without it.

c. There could be a hardware problem with the DVR that requires repair.

Q2. The indicator lights of the DVR are on, but no video display. Why?

a. The adapter may not be providing enough power. Please remove the HDD to to see if the video displays without it.

b. The video format (NTSC or PAL) of the DVR is different from that of the monitor.

c. There is a connection problem. Please check the cable and the ports on the monitor and DVR.

Q3. Why are no images displayed on some or all of the channels of the DVR?

a. There is a connection problem. Please check the cable and the ports of the cameras and DVR.

b. There is a problem with the camera. Please check the camera.

c. The video format of the DVR (NTSC or PAL) is different from that of the cameras. Please change DVR video format.

Q4. The system cannot find HDD, why?

a. The adapter may not be providing enough power. Please try another adapter.

b. There is a connection problem. Please check the power and data cables.

c. There is a problem with the HDD. Try another one.

Q5. The system cannot record, why?

a. The HDD is not formatted. Please format it using the menu option.

b. The recording function has not been enabled or is not setup correctly. Please refer to 3.3 Recording.

c. HDD is full and the recycle function has not been enabled. Please refer to 4.2.3 Record Configuration. Replace or format the HDD or enable recycle.

d. There is a problem with the HDD. Try another one.

Q6. The mouse is not working, what could be the problem?

a. Wait 5 minutes after mouse is connected.

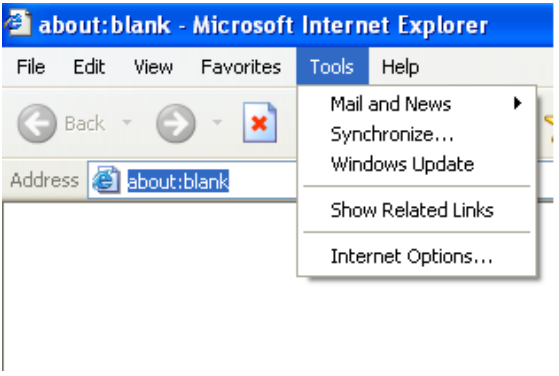
b. Mouse may not be detected. Plug/unplug several times.

c. The mouse is incompatible with the system. Please try another mouse.

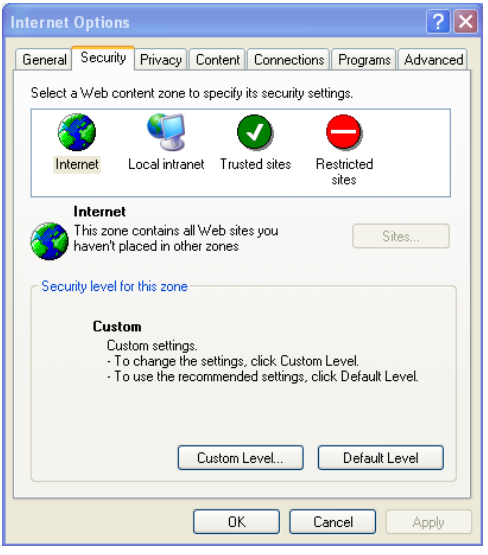
Q7. The computer cannot download the ActiveX control, how can I solve this?

a. If IE browser blocks the ActiveX control, please do the following:

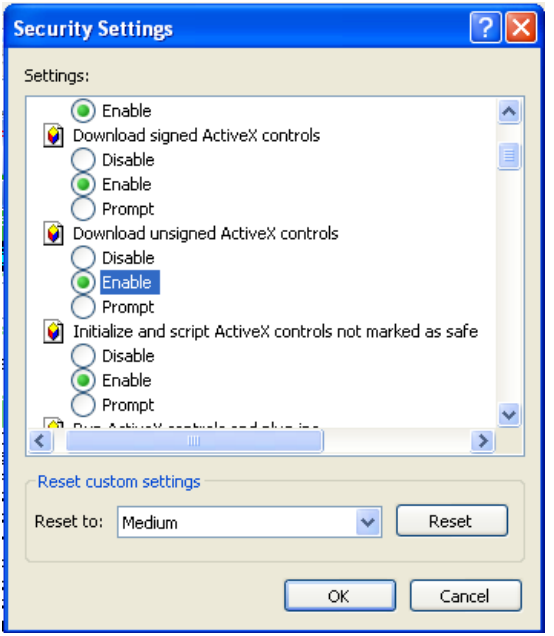
① Open IE browser. Click Tools-----Internet Options….



② Select Security------Custom Level….



③ Enable all the sub options under "ActiveX controls and plug-ins"



④ Then click ok to finish setup.

b. Anti-virus programs could also block the ActiveX control, If you still have a problem try closing them. Other plug-ins could also block it.

c. If you get a error message that says the program cannot load because the publisher is unknown or the program is unsigned, go to internet explorer, tools, internet options, advanced, scroll down to security, and select the options to Allow software to run or install even if the signature is invalid, and Allow Active Content to Run Files on My Computer.

Q8: When the DVR starts, it displays "please wait…"all the time, how do I get past that?

Check the hard drive cable and data cable to make sure they are well connected.

If still not working, please unplug them and then try re-plugging them;

It may forced to stop because the hard drive has a disabled track which causes the system to keep checking because it cannot skip over the track.

Try another hard drive or reformat the current one.

Q9: Why doesn't the mouse work when inserted into the front USB jack?

The front USB jack is only for backup to flash drive, and USB DVD writer, and does not support USB mouse. Please use the USB jack on the rear panel if using a mouse to operate the system.

Q10: How do I input password and digital numbers?

The method to input password and digital numbers is to click the box behind *password* or *items* where you need to input numbers, and then the small keyboard will appear. Please select number or letter to input (the default password is 123456), or you can use the digital keys on the front panel, or the digital keys on the remote control.

Q11: How do I upgrade the system when new functions are added or the firmware is revised?

After getting the upgraded firmware from Q-See, please copy it into a flash drive, and then select "*upgrade*" in the menu. When upgrading the firmware, please use the following method: first insert flash drive into the DVR, and then input "adwsws" in the password of system login and the system will upgrade the firmware from the flash drive automatically. After it finishes, please restart the DVR to activate changes.

Notice: Do not power off in the system upgrading process! Otherwise, it may damage the firmware and prevent the DVR from starting.

Q12: When I installed a hard drive used in another DVR of the same model it was identified as a new hard drive why is this? And why must I format it again?

When the DVR only uses one hard drive, the hard drive removed from another DVR of the same model can normally work without re-formatting. When you add another hard drive, it will identify the hard drive as a new one and inquire whether to format even if this hard drive was used in another same type DVR before. In this case, it can be used normally after being formatted according to the guide; if two or more hard drives used in different DVRs, when used in another DVR of the same type, they will be identified as two or more new hard drives, and all of them need to be formatted. If you use drives removed from different DVRs you will lose the data that is on them when they are formatted.

Appendix B Instructions for the Installation of External Hard Drive

The installation of the external E-SATA hard drive is only for the optional backup of recorded files.

I Connection of portable E-SATA hard drive

The connecting method is shown in Fig. A-1

Fig. A-1 Portable Hard Drive Connection

1. Data cable connecting with E-SATA jack
2. Hard drive power supply

Note: Hard drive power supply will be provided by the customer.

- Step 1: Power off the system
- Step 2: Connect cables as Fig. A-1
- Step 3: Restart the system, and the hard drive will be identified. (Does not support hot swap)

II. Connection of normal E-SATA hard drive

If connecting normal hard drive, please refer to Fig B-2. Its operation is the same as that of a portable hard drive.

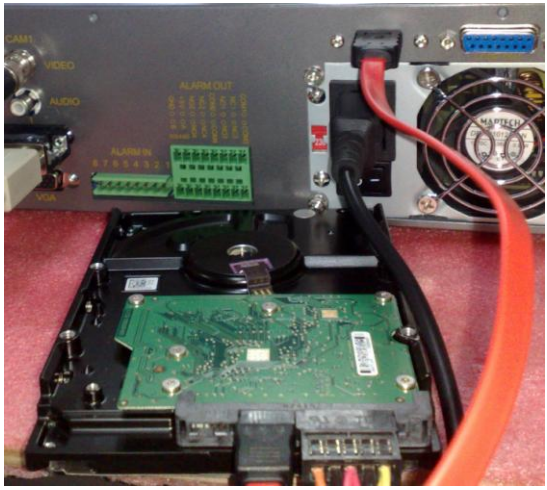


Fig. B-2 Normal Hard Drive Connection

Appendix C Calculating Recording Capacity

Users can calculate the size of hard drive needed according to the saving time and DVR recording settings. The DVR uses fixed video bit rate. Below are the details for different settings for 200 fps 8-channel DVR.

Video Format	Resolution	Frame Rate Total (FPS)	Video Quality	Bit Rate (kbps)	Used Space (MB/h)
PAL	CIF	25	Highest	640	281
			Higher	512	225
			Medium	384	168.7
			Lower	256	112.5
			Lowest	128	56
NTSC	CIF	30	Highest	640	281
			Higher	512	225
			Medium	384	168.7
			Lower	256	112.5
			Lowest	128	56

The calculation formula is:

Total Recording capacity =Used space per hour (MB/h) (coverage rate of hard drive) × recording time (hour) ×channel numbers

For instance, if you use NTSC cameras, set resolution to CIF, video quality to Lower, frame rate to 240 fps for enabling a total of 8 channels and you want the unit to record continuously for a month. Below is the calculation:

Total Recoding capacity =112.5(mb/h) X 24(hours/day) X30(days) X8(channels)

= 648000(MB)

= 648(GB)

In this case if you would install two 320GB SATA HDDs, it can almost record for one month.

For 4-channel DVR:

Total Recoding capacity =112.5(mb/h) X 24(hours/day) X30(days) X4(channels)

= 324000(MB)

= 324(GB)

If you install one 320GB SATA HDD, it can almost record one month.

For 16-channel DVR:

Total Recoding capacity =112.5(mb/h) X 24(hours/day) X30(days) X16(channels)

= 1296000(MB)

= 1296(GB)

In this case you should install four 320 GB SATA HDDs, and you can record about one month.

Appendix D Compatible Devices

1. Compatible USB flash drives based on our testing:

Brand	Capacity
SSK	512MB, 1G, 2GB
Netac	4GB
Kingston	2GB
Aigo	2GB
Smatter vider	1GB
Scandisk	4GB

Tab C.1 Compatible USB drive

2. Compatible SATA CD/DVD burners based on our testing:

Brand	Model
SAMSUNG	TS-H653B
LITE-ON	DH-20A6S01C

Tab C.2 Compatible CD/DVD writers

Notice: This does not mean these are the only ones that will work, these are the ones that we have used in our testing so we recommend them.

Appendix E DVR Specifications

For QSTD2404 4-channel DVR

Compression format	Standard H.264 Baseline
Video output	Composite：1.0V p-p/75Ω，BNC×2 S-VIDEOX1, VGAX1
Video input	Composite：1.0V p-p/75Ω，BNC×4
Display Resolution	720*576 (PAL), 720*480 (NTSC)
Record Resolution	352*288 , 704*576 (PAL) 352*240 , 704*480 (NTSC)
Display Frame Rate	100FPS (PAL), 120FPS (NTSC)
Record Frame Rate	100FPS, 25FPS (PAL) ; 120FPS, 30FPS (NTSC)
Audio input	-8dB~ 22k, RCA X4
Audio output	-8Db~92dB, RCA X1
Alarm input	NO or NC 4CH
Alarm output	4CH
Record Mode	Manual / Sensor /Timer / Motion detection
Simplex/Duplex/Triplex	Pentaplex
Network Interface	RJ45 (LAN, INTERNET)
PTZ control	YES
Communication interface	RS485, USB2.0 x 2(one for flash backup, another for USB mouse), PS/2 x 1,
Hard drive info	SATA x 3+DVD-RW x 1 (optional)
Remote control	YES
Backup Ports	eSATA -hard drive, USB -Flash Drive
Power supply	220V or 110V

Appendix F DVR Specifications

For QSTD2408 8-channel DVR

Compression format	Standard H.264 Baseline
Video output	Composite：1.0V p-p/75Ω，BNC×2 S-VIDEOX1, VGAX1
Video input	Composite：1.0V p-p/75Ω，BNC×8
Display Resolution	720*576 (PAL), 720*480 (NTSC)
Record Resolution	352*288 , 704*576 (PAL) 352*240 , 704*480 (NTSC)
Display Frame Rate	200FPS (PAL), 240FPS (NTSC)
Record Frame Rate	200FPS, 50FPS (PAL) ; 240FPS, 60FPS (NTSC)
Audio input	-8dB~ 22k, RCA X8
Audio output	-8Db~92dB, RCA X1
Alarm input	NO or NC 8CH
Alarm output	4CH
Record Mode	Manual / Sensor /Timer / Motion detection
Simplex/Duplex/Triplex	Pentaplex
Network Interface	RJ45 (LAN, INTERNET)
PTZ control	YES
Communication interface	RS485, USB2.0 x 2(one for flash backup, another for USB mouse), PS/2 x 1,
Hard drive info	SATA x 3+DVD-RW x 1 (optional)
Remote control	YES
Backup Ports	eSATA -hard drive, USB -Flash Drive
Power supply	220V or 110V

Appendix G DVR Specifications

For QSTD2416 16-channel DVR

Compression format	Standard H.264 Baseline
Video output	Composite：1.0V p-p/75Ω，BNC×2 S-VIDEOX1, VGAX1
Video input	Composite：1.0V p-p/75Ω，BNC×16
Display Resolution	720*576 (PAL), 720*480 (NTSC)
Record Resolution	352*288 , 704*576 (PAL) 352*240 , 704*480 (NTSC)
Display Frame Rate	400FPS (PAL), 480FPS (NTSC)
Record Frame Rate	400FPS, 100FPS (PAL) ; 480FPS, 120FPS (NTSC)
Audio input	-8dB~ 22k, RCA X16
Audio output	-8Db~92dB, RCA X1
Alarm input	NO or NC 16CH
Alarm output	4CH
Record Mode	Manual / Sensor /Timer / Motion detection
Simplex/Duplex/Triplex	Pentaplex
Network Interface	RJ45 (LAN, INTERNET)
PTZ control	YES
Communication interface	RS485, USB2.0 x 2(one for flash backup, another for USB mouse), PS/2 x 1,
Hard drive info	SATA x 4+DVD-RW x 1 (optional)
Remote control	YES
Backup Ports	eSATA -hard drive, USB -Flash Drive
Power supply	220V or 110V

Q-SEE PRODUCT WARRANTY

Thank you for choosing our products.

All of our product users have a conditional free warranty repair service for hardware within 12 months starting from the purchase date, and a free exchange service within one month (valid for manufacturing defects). Permanent upgrading service is provided for the software.

Liability Exclusions:

Any product malfunction, abnormalities in operation or damage caused by the following reasons are not within the free service scope of our company. Please select payable service.

(1) Equipment damage caused by improper operation

(2) Improper environment and conditions in/on which the equipment operates, e.g., improper power, environment temperature, humidity and lightening strike etc. that cause equipment damage.

(3) Damage caused by acts of nature: earthquake and fire etc.

(4) Equipment damage caused by the maintenance of personnel not authorized by our company.

(5) Product sold over 12 months ago.

In order for us to provide various services to you please complete the registration procedure after you purchase the product. Cut off or copy User's Information Card and fax or mail it to us after the card is filled in. You can also register the product by going to the www.q-see.com website and clicking on the Register link.

Customer Information Card

User's Name	**Mr./Mrs.**
Company Name	
Postal Address	
Postal code	
Phone Number	
E-mail	
Model Number of Product	
Serial Number of Product	
Purchase Date	
Distributor	

If you have questions:

Contact Us:

Mailing Address:
DPS Inc.
8015 E. Crystal Dr
Anaheim, CA 92807

Customer Service:
Phone: 877-998-3440 x 538
Email: cs@dpsi-usa.com

Website:
http://www.q-see.com
Fax:
714-998-3509

Tech Support:
Phone: 877-998-3440 x 539
Email: ts@dpsi-usa.com